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ABSTRACT

Current developments in the preparation of college teachers were examined based on interviews, first-hand observations, and review of program details and individual student reactions to them. An overview of the circumstances that focus attention on college teaching and issues specific to the Doctor of Arts degree are presented. Alternatives to the Doctor of Arts program, including multiple track PhDs and the EdD and other less than doctoral level offerings, are considered as a basis for suggesting improvements. Basic considerations involved in developing a degree for college teaching and the overall characteristics of a teaching degree, with particular attention to the substantive requirements, are discussed. Additional topics include: the needs and requirements in the professional area, practices and problems defining and carrying out effective internships, the problems of examinations and evaluation and their role in a teacher preparation program; and views of Doctor of Arts candidates and degree recipients. A bibliography is included. (SW)

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FOREWORD

A quarter century ago Jacques Barzun described the PhD octopus in his classic volume, *Teacher in America*. He stated, categorically, that "the doctorate shows nothing about teaching ability" and that a number of progressive colleges were attempting to go beyond "the two false premises" of the American university system; namely, "that all teachers must add to the existing stock of knowledge by research and that all self-respecting institutions fulfill their role only by employing productive scholars."

The Doctor of Arts Degree represents the most dramatic attempt, on a nationwide basis, to provide a new doctoral degree program based on Barzun's plea for change.

The current volume is the second developed by Paul Dressel and his colleagues on this subject and made available to American higher education by The American College Testing Program. The conception of "college teaching," which is implicit in the approach in these two volumes, encourages and can result in major improvements in the quality of teaching in postsecondary education. It is important to consider also the faculty member-teacher as a faculty member-educational counselor. A very natural result of a teaching-learning situation is student counseling by interested faculty members. The teaching roles emphasized in the suggested programs for the Doctor of Arts Degree include advising of students as an important part of the whole effort of the college teacher. Because of ACT's concern for the continuing improvement of service to students through this broader concept of college teaching, it has been pleased to publish *Blueprint for Change: Doctoral Programs for College Teachers* and the present volume. Students are "whole persons" and a program for the education of college teachers which is built on this premise can truly revolutionize our postsecondary institutions in a most positive way in the coming decades.

Fred F. Harcleroad, *President*
The American College Testing Program

PREFACE

In the spring of 1972, the senior author was asked by Dr. Alden Dunham of the Carnegie Corporation to undertake a review of Doctor of Arts programs, emphasizing those to which the Corporation had made a start-up grant. During the fall of 1972, and the winter of 1973, we made visits to thirteen universities with Doctor of Arts programs in operation and two others with programs in process of discussion. Materials were also collected from a number of other universities with operating programs in process of development. In two cases (MIT and Dartmouth), statements explanatory of the consideration and rejection of the DA in favor of other approaches were obtained.

In visits and correspondence, it became evident that a number of universities were successfully using the EdD to accomplish the intent of the DA, that modified PhD's were becoming available in a number of institutions, and that the PhD in higher education in some cases was being used as a preparation for undergraduate teaching. Dr. Dunham and the Corporation graciously agreed to extend the survey purposes to include a review of some of these alternative routes to college teacher preparation. Dr. Frank Blackington, Director of the Honors College at Michigan State University, visited ten universities and provided extensive reports on the use of the EdD and the PhD in higher education. Information on the modified PhD's in substantive disciplines was accumulated by mail and telephone.

In providing this review of current developments in preparation of college teachers, we have attempted to provide on one hand a factual report of developments while on the other we have not hesitated to make our own appraisal of the strengths and weaknesses of what we have seen, heard, and read. We believe the distinction is clear. In many respects, this report is a sequel to the earlier ACT publication, *Blueprint for Change: Doctoral Programs for College Teachers.* Whereas that statement relied almost entirely upon review of printed materials, this one is heavily based upon interviews, first-hand observations, and review of program details and individual student reactions to them.

Chapter 1 provides a quick overview of the circumstances which focus attention on college teaching. Chapter 2 continues this broad overview and examines the response as provided by the Doctor of Arts. Chapter 3 considers some of the available alternatives, preparations, PhD variants, EdD and PhD in higher education and other less than doctoral level offerings. Chapter 4 presents the developed view of the senior author, generally endorsed by his associate, as to the basic considerations involved in developing a degree for college teaching. This provides a background from which actual developments and their deficiencies may be appraised. Chapter 5 discusses the overall characteristics of a teaching degree with

particular attention to the substantive requirements. Chapter 6 discusses the needs and requirements in the professional area. Chapter 7 considers some of the practices and problems in defining and carrying out effective internships. Chapter 8 looks into the problems of examinations and evaluation and expresses particular concern that these examinations may have been carried to excess without adequate attention to their role in a teacher preparation program. Chapter 9 reports upon what surely must be the first comprehensive review of the views of DA candidates and degree recipients. Despite the difficulties in getting new programs underway these reactions, while critical, are surprisingly favorable. Chapter 10 provides an overall summary and suggests some major concepts and principles for further development of degrees for college teachers.

Although we have been critical of what we have seen, we do not expect widespread acceptance and adoption of the views accepted here, nor do we really desire that. The preparation of college and university teachers will always vary with institutions, departments, and the needs, interests and commitments of students and faculties. Nor would we expect the attainment of perfection in teaching if all teachers were prepared according to some such model as we suggest in the final chapter. There have been excellent undergraduate teachers with PhDs though we suspect the degree had nothing to do with the quality of teaching. There will be poor teachers with DA degrees. We are convinced that most attempts at college teacher preparation, whether by DA, EdD, PhD or otherwise, have been too constrained by tradition, by emphasis on course requirements and disciplines, and by lack of adequate attention to the student and learning process and the means of motivating and facilitating learning. Much more can and should be done but it may well require a second or third generation of the DA and its alternatives before the research constraints of the PhD are overcome.

In bringing this task to a conclusion we must express our thanks to many persons. Our appreciation is extended to Alden Dunham for supporting and encouraging our efforts. We express our thanks to those deans, chairmen, faculty members, graduate students, and graduates who gave so readily of their time in responding to our questions and finally expressing their concerns. As usual, Ruth A. Frye has been of inestimable help to the senior author in assisting in a variety of ways. And Marion Jennette carried out the many chores of preparing final copy.

Finally, we would like to thank Dr. Fred Harcleroad, President of The American College Testing Program, for his continued interest in the project and for his support in arranging for publication by ACT. We are especially pleased that this is the case, since the earlier report on the Doctor of Arts *(Blueprint for Change: Doctoral Programs for College Teachers)* was also published by ACT.

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PERSISTENT CONCERNS AND CRITICISMS

In recent years, concern about the quality of college teaching has been widely and vociferously expressed by students, by administrators, by legislators, by the general public, and even by some of the faculty. This concern is not new, but recent events have added fuel and fanned the ever present embers of dissatisfaction into a more intense heat while also casting some new light on faculty attitudes, actions, and responsibilities in promoting change and developing tactics for it.

It is difficult to maintain a reasonable balance in discussions of appraisal, improvement, and reward of teaching. The college student (if we may judge from extensive interviews, as well as the reports of others) in any given term is fortunate if he has one *good* teacher. Good, defined in his own terms, involves profound knowledge of the discipline, enthusiasm for teaching, awareness of students as individuals, clarity in presentations and assignments, fairness in grading, and, perhaps above all, an awareness that the course has relevance beyond the confines of the text, classroom, and campus. The student finds that too many of his teachers are indifferent, unavailable, disorganized, unclear, and incoherent in lectures, discussions, and assignments. Some are completely unwilling or unable to discuss the relevance of the course substance to other disciplines or external realities. No wonder that, at times, even the normally rather passive student, charitable in his appraisal of the worth of his education, flares into a heated demand for student evaluation of faculty and administrative discharge of the incompetent. But rarely do these demands have much impact and, despite their validity in some cases, this is perhaps for the best. Student evaluation is a weak and erratic basis for rewarding or condemning the performance of faculty members because the student's ability to appraise and value good teaching has been inhibited by the inadequacies of what he has experienced. It is also a strong possibility that students may, like some folks naive about art or music, "know what they like," but what they like may

not be really good as adjudged by reasoned criteria based on educational objectives and the known facts about motivation and the nature of the learning process.

Academic administrators, who have themselves usually arisen from the teaching ranks, may become inured to student complaints (direct or referred by other administrators). Yet they frequently express their dissatisfaction with the quality of instruction, with the indifference of professors to complaints, and with their own inability, through the reward system or otherwise, to materially affect the prevalent patterns of instruction. Legislators and the general public have, in recent years, expressed concern about increasing costs of education related, in considerable part, to a flight of faculty from teaching, and indifference or active antagonism of those faculty members who reject criticism and refuse to reexamine their instructional practices or explore and evaluate alternative available approaches to foster student learning. The board chairman of a nationally esteemed private university recently expressed to the senior author his concern about demands for ever increasing resources in the face of unreasonably low teaching loads. Many professors seemed to regard anything more than one or two graduate seminars per year as interfering with their efforts in research and remunerative consultation. And such is the strength of faculty opinion, buttressed by widespread lowering of instructional load over a span of years, that administrators dare not take appropriate action to restore a reasonable balance between teaching and other student-oriented activities on one hand and research on the other.

The prestige accorded to research is a combination of many interrelated and reinforcing factors developed since the introduction of the PhD. The PhD itself, as imported from Germany, emphasized scholarly research and an original contribution to the discipline. The preferred teaching role was associated with graduate seminars or doctoral candidates; and from this start, one can readily trace the preference for research, for graduate instruction, and for a particular conception of teaching. That conception of teaching is relatively simple—a professor demonstrates his stature by his research writing and publication. As an authority in his discipline, he not only presents a desirable model for his students, but his mastery of the discipline also ensures the effective presentation of his field to selected and highly motivated students. Teaching methodology, learning theory, behavioral objectives involving application and relevance of learning, and principles of course and curricular development are irrelevant in this conception of teaching.

The assumption that students are highly motivated toward mastery of the disciplines was never (with few exceptions) justified even when the student population was limited and highly selected. As colleges and universities expanded their curricular offerings to include technical and professional

programs and attracted an increasingly large segment of young people, the assumption of dedication and motivation became even more questionable; and paralleling this development, the PhD became, even in the smaller colleges, the ticket certifying capability for a career as a professor. Competition among colleges for prestige and accrediting agency evaluation practices, if not requirements, reinforced the faculty desires to expand graduate education and reproduce their own kind. In these circumstances, the relevance of the PhD to undergraduate education went almost unquestioned. Those who did express doubts were likely to be ridiculed as favoring a soft rather than rigorous education. Somehow, any attempt to direct the attention of professors to the need to improve teaching and learning was viewed as an attempt to remodel college teaching to conform to the preparation for elementary or secondary school teaching—a model rejected and denounced by the disciplinary-oriented professor.

Education in the national need following Sputnik brought a deluge of federal dollars into existing universities and a transformation of former teachers' and some liberal arts colleges into graduate institutions, each seeking to share in the largesse and move up the prestige ladder. Faculty and administrative aspirations, at least in this regard, for once coincided. Graduate programs developed rapidly and, as is now apparent, well beyond any realistic appraisal of national need.

Even more recently, the surplus of doctorates, the withdrawal of federal funding, the actuality of decreasing enrollments, and widespread disenchantment with higher education among students and prospective students, legislators, higher education benefactors, and the general public have brought pressures for strong external coordination or control of roles and aspirations of institutions. Reduction in funds has forced faculty from research back to the classroom, and frank appraisal of faculty performance therein has caused many of the faculty to recognize the need to reexamine the character of college teaching.

In perspective, the college originally founded to serve specific societal needs and a particular clientele, moved gradually to competition for prestige with other institutions, and then to a circumstance in which faculty and many administrators viewed their institutional affiliation only as a means to fulfill their ambitions on a larger national scene. Now, changing circumstances force a reconsideration of institutional obligation to society. The role of the institution in relation to other institutions and to the needs and demands of the supporting society brings the teaching responsibilities of the faculty once again into focus.

The response of the faculty, even when sincere, is hampered and limited by tradition, by experience, and by their research-oriented education. Some can see no need beyond improvement in the classroom performance—a

clearer presentation of the intricacies of the discipline. Those who might wish to modify the PhD program are concerned that the integrity of the degree might be called into question by any compromise which would dilute its research character. Those departments which have initiated the Doctor of Arts (thereby announcing their commitment to the preparation of a college teacher) do not thereby abandon all their preconceptions about graduate study. In one department offering the DA in mathematics, the chairman admitted that faculty predispositions resulted only in permitting a modification of the dissertation requirement to include an historical treatment, a synthesis of research, or possibly even a topic related to revising or developing a course. Another department indicated that, in its appraisal of the required internship in teaching, the designated committee limited its attention to the style of the lecture and the scholarly competence exhibited in the presentation of the material.

Innovation is a slow process even, or perhaps especially, in education. History reveals that many professors were dismayed by the invention of printing which gradually placed in student hands materials and texts which formerly were available only in the professorial lectures. Today, programmed learning materials, televised instruction, videotaped lectures and demonstrations make readily available to students for concentrated and repeated use learning experiences which, in some respects, are superior to those provided in the average classroom. These do not necessarily eliminate the professor, but they do threaten to alter his role and to force him to become aware of the motivations and goals of prospective students as well as of the scholarly adequacy of his performance.

In the past, the major criteria used in admitting students to doctoral programs were their past record of performance in courses in the discipline, recommendations of their professors, and perhaps a qualifying score on the appropriate test of the Graduate Record Examination. For admission to a teaching doctorate, there are numerous other criteria which may be applied, such as, commitment to undergraduate teaching; interest in students as well as in intellectual inquiry; ability and interest in working with students and faculty on course and curricular planning; values, attitudes, personality, and temperament appropriate to teaching; breadth of interests (nonacademic as well as academic) which provide points of informal contact with others as well as a basis for instruction which relates the disciplines to the goals and interests of students.

The application of such criteria to the admissions process will not come easily. It is doubtful that any admissions committee composed of professors in a discipline can agree on the precise meaning of such criteria or on whether they are important or appropriate; and in the current scene the demand for elimination of bias and inequity may make it very difficult to debar an extremely able student from candidacy for a teaching degree

simply because of narrow interests, personality, or temperament. Such factors may have to be assessed very tentatively and used tactfully in counseling individuals away from teaching.

Courses and experiences related to instruction and learning have been included in the doctoral programs for preparing college teachers. There is a wide cleavage of opinion among faculty members as to whether such courses have any value—that is, whether they can and do alter individual characteristics and behavior in such a manner as to favorably affect the teaching and student learning.

The use of criteria supposedly related to teaching success must interact with the requirements of such courses and internships. If we know what makes for excellent teaching and can assess it as part of the admissions process, why should we impose additional requirements? If such courses and experiences are really successful in preparing teachers, why should any teaching-related admissions criteria be applied? Always, when such questions are raised, there are many skeptics among the professors—even those who are themselves good teachers— who doubt that we know enough about learning or teaching to define good teaching or organize a program to prepare good teachers. These convictions have long negated attempts to alter doctoral programs in reference to teaching needs and they continue to hinder efforts in this direction. Yet one may have some optimism that the widespread interest and discussion of a new degree (the DA) or of modifications in old ones (PhD or EdD) will at last bring about long-needed changes despite the fact that universities currently face serious financial problems, stable or decreasing enrollments, and external demands for greater accountability. Hardship is perhaps more conducive to self-examination and change than prosperity.

THE DOCTOR OF ARTS DEGREE

Those aware of the proliferation of degrees in American higher education (over 400 master's degree titles and at least 64 doctorates, including professional degrees in medicine and dentistry) might either have shrugged or shuddered at adding one more to prepare college teachers. There can be no certainty as to when or by whom the title was created. Since the doctorate in philosophy had long been accompanied by doctorates in education, in science, and even in humanities and social science, the idea of another parallel degree designation must have occurred at various times to many persons. As to the occasionally heard protest of the unsuitability of a degree in the arts being widely applied to all disciplines, this contention has no greater weight than the similar use of philosophy. The latter is sanctioned by tradition and the all-embracing nature of philosophy in an earlier age, but a Doctor of Philosophy in mathematics, literature, history, or physics (other than general usage) is no more appropriate than a Doctor of Arts in the same disciplines. One might quibble further that teaching should become more of a science than an art but, despite extensive research on learning and teaching, both remain highly individualistic. Teaching is at least as much an art as a science even in the sciences. And knowledge and experience can improve performance in an art.

The discussion of the need for special preparation for teaching is nothing new. Though disciplinary scholars continue to protest, it was long since decided that elementary and secondary school teachers require varying amounts of study in education for certification. Whether those who taught these courses were themselves effective teachers, or whether the required courses in psychology of learning, curriculum development, foundations, philosophy, really led to any improvement in the teaching of individuals has long been, and continues to be, argued. The pervasive doubts about the worth of education courses, of supervised teaching experiences, and of the quality of instruction in education provide a background which results in any attempt at the improvement of teaching being regarded with suspicion.

When a teaching degree was discussed, warning signals were quickly hoisted by various national committees demanding that experiences in teaching, course development, materials development, and evaluation be taught by the departmental faculty in the major field. It mattered not that many professors had not heretofore given any thought to improving teaching, and they may, in fact, have furnished convincing examples of the need to improve undergraduate teaching. And thus, in some cases, the task of offering specific courses and experiences related to teaching was transferred from those who understood the problem, but had not done well in solving it, to those who did not even recognize that the problem existed.

But, with continuing complaints from students, decreasing research funds, and a forced return to teaching, a sufficiently large segment of the faculty in many departments has accepted the reality of the complaint about teaching and has indicated a willingness to do something about it through modification of existing degrees or the development of a new one.

Almost every statement about a degree for teaching begins with certain nonnegotiable assertions comparing the new degree with the research-oriented PhD:

1. The degree should be equal in quality but different in character.

2. The admission, retention, and degree standards should be equally demanding.

3. Both degrees should require a minimum of three years of graduate work and culminate in a dissertation.

The meaning attached to these three assertions is at best ambiguous. How does one determine whether a law or dental degree is equal in quality to an MD? In general, an MD is accorded greater prestige than a DDS. This has little to do with quality. Researchers may always regard teaching as an inferior role, but that prejudice has nothing to do with quality. A student incapable of or disinterested in original research may succeed in a teaching degree. Does this mean that the admission, retention, and degree standards are inferior? To some researchers it surely will, but, is their opinion anything more than snobbishness? Few students complete a PhD in three years (the period urged for the DA), but time provides no assurance of quality. Finally, for some research-oriented faculty, a dissertation must always be an addition to knowledge in the discipline. Anything less, whether a thesis, a scholarly essay, or a routine contribution to explaining, organizing, or developing an idea, is inferior. Is a research dissertation (or its alternatives) really necessary for the prospective teacher? If so, what should be its nature and the appropriate measures for judging its quality?

It may be more appropriate to consider the desirable and distinctive differences between a degree for teaching and a degree for research. The following pairing of characteristics indicates some of the differences which have been suggested by those who have considered the problem.

Differences between DA and PhD Degrees

DA	*PhD*
1. Specifically designed to prepare college teachers who are also scholars.	1. Specifically designed to prepare researchers who may teach, although preferably at the graduate level.
2. Admission requirements include evidence of applicant's potential, interest, and aptitude for college teaching.	2. Admission requirements usually emphasize evidence of academic achievement and research potential.
3. Major field is a discipline broadly interpreted or may span several related disciplines on a problem or theme basis.	3. Major field is usually a subfield of a discipline.
4. Dissertation is related to instructional or curricular problems in teaching field. It should demonstrate mastery of academic content and ability to select, organize, present, and evaluate content materials in undergraduate course.	4. Dissertation is usually a contribution to new knowledge in a specialized subfield of a discipline.
5. Emphasis on skills and abilities needed to understand research in the discipline and relate it to the need for revising or updating undergraduate courses and curricula.	5. Emphasis on mastery of research skills, tools, and equipment required to carry on research in and to understand research of others in the discipline.

6. Development of ability to read and interpret pedagogical research and to develop and evaluate new materials and instructional techniques in reference to course and curriculum objectives.	6. Development of ability to develop and evaluate new research instruments and techniques in reference to personal research goals.
7. Development of the total environment (people, broad educational goals, course requirements) in which undergraduate education takes place and of sufficient understanding of the problems involved that one can contribute to their resolution through teaching, student advising, and committee service.	7. Development of awareness of the sources of research support (internal and external) and of sufficient understanding of the problems and techniques involved in obtaining research support so that the young PhD can continue his research program.

These differences can be viewed in a somewhat different manner by using categories more closely related to program planning and requirements.

DA	*PhD*
Course Work	
More course work than PhD and more widely distributed within and perhaps beyond a single discipline. (Broader coverage than PhD). More flexible requirements.	Stress on specialization culminating in research.
Educational Objectives	
Affective as well as cognitive and inclusive of liberal education goals.	Almost solely cognitive and limited to those relevant to mastery of the discipline.
Research	
Oriented to learning the discipline and how to teach it effectively and relevantly. May be an essay rather than original research.	Learn and practice research techniques to expand the discipline.

Research Tools	
Relevant to teaching, but including some grasp of research methods of the discipline.	Relevant to research in the discipline.
Examinations	
Broader than PhD and may include teaching related knowledge and skills.	Knowledge and competency in the discipline and in specialized areas thereof.
Teaching Experience	
Supervised and evaluated internship required.	Unsupervised, primarily providing support to the student, and not usually part of degree requirements.
Support Facilities and Costs	
Educational technology and experience in use of it desirable. Less need than PhD for expensive laboratory research equipment.	Expensive research equipment and space required in sciences.
Time for Completion	
Three years beyond baccalaureate. Full-time residence may not be required.	Usually longer than three years. At least one year full-time residence.

In summary, then, the program of a prospective teacher for undergraduates should provide:

a. Broad coverage of a discipline or field relevant to undergraduate education, but it need not include advanced graduate courses in all topics that occur in the undergraduate curriculum.

b. Demonstration on the part of the individual of the capability of independent assimilation of new materials as a prelude to understanding the task of directing undergraduate independent study.

c. A grasp of some of the most significant actual and possible interrelations of his area of study with other fields and with practical problems and concerns.

d. Mastery of research tools and methods of the discipline at an understanding, performance, and demonstration level.

e. Demonstrated facility in use of research and evaluation tools and methods required to understand pedagogical research and engage in curricular and instructional experimentation.

f. A grasp of the nature and objectives of undergraduate education, its diverse interpretations in various institutions and the differences among students in motivations, abilities, and goals.

g. A background of knowledge and successful experience (internship) in college teaching, especially at the freshman and sophomore levels where the greatest variety in student background and motivation is typically found.

h. Familiarity with the latest teaching technology and its most effective use.

This description of a degree for teaching (DA or otherwise) goes, in its specifics, far beyond what many faculty members and organizations would accept as desirable. Those who emphasize knowledge of the discipline as the primary factor in successful teaching are inclined to discount or ignore the significance of methods, learning principles, student differences, the service role of some disciplines, the relations among disciplines, the practical implications of a discipline, and the subsidiary role of a discipline in attaining a liberal education. When the teacher is regarded as a purveyor of the discipline, these experiences are irrelevant and the internship is, at best, a perfunctory requirement equated to giving an effective lecture. A model which takes a broader conception of the subject matter field and requires specific attention to objectives, teaching methodology, instructional materials, and student motivation and learning arouses much opposition.

Any attempt to include objectives, pedagogy, and learning theory is viewed as a possible takeover by educationists who would dilute the content and cater to student interests. Even if such considerations have significance at the secondary and elementary levels, they can only debase the education of mature students who should be strongly motivated to learn. And presumably those students who are not motivated should either not be accepted or quickly eliminated. After all, so the argument runs, the PhD was originally a license to teach, and both tradition and reason require that teaching must be done by highly trained scholars and researchers who, in their presentations, can and do follow the dictates of the disciplines. Any attempt to focus on teaching and learning is an attempt to reach ineducables and debases graduate education. Since no one really knows how

to evaluate teaching, a degree which does not require a research dissertation lacks any means of quality control.

Stated thus baldly, these criticisms register neither the emotion nor the deep-seated commitments of those who state these views. And curiously enough, these views exist even among PhDs who have not done any research since they completed their dissertation. And so another issue arises: Can PhDs in sufficient numbers in any department or discipline revise their thinking to plan and carry through a program for preparing teachers? Even if they are willing to make the commitment, do they know enough or are they willing to learn enough to do the job? As one views some feeble attempts toward a DA, the answer is certainly "no" in some departments.

A review of DA programs demonstrates that there are many ways in which the research PhD bias operates to the detriment of any new program:

- The internship is downgraded, given few or no credits, and sometimes waived for those with teaching experience.
- The number of course credits is greatly expanded to ensure complete coverage of all aspects of the discipline and perhaps to include some specialization reminiscent of the PhD.
- The student is required to do two theses—one of the typical research type and one related to teaching.
- Foreign language requirements are imposed to maintain equivalence to the PhD.
- Courses or seminars dealing with instructional and curricular problems or higher education itself are discouraged, given limited credit, or taught by those of dubious competence.
- Alternatives to the research dissertation are discouraged by faculty disinterested and perhaps incompetent to direct any other kind.
- Courses outside the major discipline (even when recommended) are downgraded in advising and replaced by additional courses in the major.

Such practices not only destroy the character of the proposed degree, but also discourage students from pursuing it, especially if the PhD path is available, relatively clear, and obviously more respected by the faculty. In contrast, some departments and individuals with limited experience in graduate study can readily develop a conception and program for teaching

which confirm the fears and prejudices of those convinced that any degree which veers away from the demanding research task will be second-rate.

Practices or circumstances of this latter sort which were actually observed include:

- A mediocre or weak faculty in respect to scholarship;
- A forced settlement for a DA program when the faculty hoped for a PhD;
- Attempts at interdisciplinary approaches with no focus, thereby permitting a diffused program made up of unrelated blocks of credit from several disciplines;
- Assignments of a block of credits and courses (possibly specified and required) in education, higher education, or psychology with little or no attempt to coordinate these and integrate them into the total program;
- Lack of resources in staff, library, educational technology, and space to launch or support a program;
- Lack of leadership and program review to assure that regulations and quality are upheld in planning individual programs;
- Division of the program into a number of unrelated experiences, courses, and seminars in the discipline, courses or seminars dealing with teaching and learning, research in discipline, research on teaching, and internship;
- Elimination of dissertation or thesis leaving the program with no adequate and clearly defined culminating task which marks completion of the degree requirements;
- Use of the DA degree as an alternative for PhD candidates whose motivation for continued confrontation in depth with the structure and rigor of a discipline and whose ability for research are both lacking;
- Acceptance of weak students to provide numbers justifying the existence of the program.

Some of these complications were certainly seen by those organizations and individuals who expressed skepticism of the need for a new degree and doubts of the possibility of maintaining high (if not actually equivalent) standards. Energetic and conscientious graduate deans know that their task of maintaining standards requires continual though low-key monitoring and blocking of recommendations and practices which would

undermine the character and quality of graduate degrees. Nevertheless, inadequate dissertations are accepted and some programs deteriorate. This has already happened on many campuses with the master's degree, which has become only a credit grubbing chore sometimes completed in three summer sessions. But, whereas an established degree can weather some poor practices and products, a new degree can suffer irreparable harm by a few widely publicized examples of dubious practice.

Alden Dunham (1969), surely one of the more insightful and enthusiastic supporters of the DA, recognized the difficulties of developing a new degree and establishing its reputation. As he pointed out, unless some prestigious graduate universities are willing to support such a program, it will inevitably be second-rate by association with second-rate institutions. On the other hand, a teaching-oriented degree may have hard sledding in an institution where the PhD is the established degree and where DA candidates may be regarded as also-rans. The former colleges of education, lately come to university status by title if not by character and anxious to establish full-blown graduate programs (which even a decade ago were not really needed), could be a more natural environment to establish a teaching doctorate. And, in so doing, these institutions could simply extend and refine their long-time commitment to the preparation of teachers.

Yet this natural and apparently obvious solution to any extensive development of teaching doctorates has been beset with hazards resulting from the long history of the regional state universities which usually started as normal schools, became successively teachers' colleges, colleges of education, broadly-based colleges of liberal arts, science, and industrial arts, and then were thrust—largely unprepared in staff, facilities, resources or vision—by legislative action and political maneuvering into university status.

Many of these institutions had long suffered from a rift between education and the substantive disciplines even more serious than that found on liberal arts college campuses and at established universities. In a college of *education*, the arts and sciences were clearly supporting departments with limited ability to develop programs or claim loyalties of students. The solace and security of being "top dog" were thereby denied, especially since deans and presidents typically were drawn from education. In the new glory of university status, presidents and *some* faculty aspired immediately to all the trappings of a university. New and young faculty members with PhDs were sought with assurance of being on the ground floor in adding doctoral programs. But, for some of the established faculty, these new programs constituted a threat. Conservative chairmen, faculty nonproductive in scholarly ways, and even those strongly committed to undergraduate education were thrust aside as the PhD parade was formed. Of the quality of some of these programs, the less said the better, but curiously enough, the

issues of quality and of need have generally been ignored or muted in the thrust toward "greatness." Those institutions that achieved the PhD were distinctly not interested in the DA; but not all former "colleges of forgotten Americans," to use Dunham's phrase, were able to add PhD programs. Those that did not were in some cases embittered by the experience and hardly in the mood for conscientious planning of what some members of the faculty regarded from the beginning as a second-rate degree. Furthermore, the gulf between the arts and sciences faculty and education in some of these colleges meant that the faculty members responsible for the DA were no more aware of the problems of preparing teachers than were their colleagues in the university.

The issue of appropriate institutions for initiating a teaching doctorate is not resolvable by demands either for acknowledged prestige or historical commitment to education. Nor can it be made solely dependent on the presence of a few individuals who display enthusiasm in developing proposals. The motivations of individuals and committees are often obscure and deliberately so. Promotion of a new program can bring some measure of attention by administrators; it might even lead to an administrative assignment, budget, and secretary, and *surely* one who promotes teaching must be himself an unusually fine teacher. The possibility of additional funds or foundation grants can (and did, in this case) generate proposals from institutions in which insufficient spade work had been done and faculty motivation and qualification for the task were minimal. In two cases, presidential involvement was the starting mechanism. In several cases, weak or inappropriate departments were selected simply because of willingness, personal rapport, or administrative preference.

Sound criteria for initiating a teaching-oriented degree must include, as a minimum, the following:

1. Strong central administrative support and coordination from the office of the graduate dean is essential in any new graduate program, but especially so in one which has elements transcending departmental resources and capabilities. Some one person must assume a major role in educating faculty in defining programs, and specifying the essential experiences and standards to be met. This person must also ascertain that program intent is not thwarted by the ignorance, disinterest, or active antagonism of faculty who direct student study programs.

2. The institution must be one in which the quality of undergraduate education is a central and continuing concern of administration and faculty. Regular review and continuing innovation and evaluation of the undergraduate program in a department should be a prerequisite to any proposal for a teaching degree based on a department. A department

which cannot exhibit its own undergraduate program as a model does not have a faculty capable of defining and fostering a teaching doctorate.

3. No teaching doctorate should be launched in an institution until there exists a critical mass of key programs which can interact and cooperate. This is essential if departments are to be prevented from attempting to provide all elements of the program within their own resources and if additional resources, such as special courses, seminars, colloquia, educational technology experiences, are to be provided. Moreover, it is essential that each degree candidate sense that undergraduate education is more than a major and a combination of departmental offerings. Effective teaching, effective advising, and effective work on undergraduate curriculum development transcend disciplinary boundaries.

4. No program should be initiated without insistence that special efforts be made to provide a unified experience culminating in a planned and well-executed teaching role which is carefully analyzed by the individual, thoroughly evaluated by the mentor or committee, and viewed as the climactic performance justifying prediction of a successful future in teaching and therefore the award of a degree.

If such criteria as those just suggested had been rigorously applied, most of the universities and departments offering DA programs would not have introduced them. But these specifications are, as is often true, clearer by hindsight than when programs are being launched. Furthermore, external and unanticipated events prevented many of the institutions from following through on their original expectations for new programs and for providing resources and coordination for them. In many states, moratoriums on all new graduate programs precluded the critical mass requirement. Even when provision is made for considering needed and innovative proposals, the consideration is program by program, and the tendency to spread the "goodies" over the institutions in a state system virtually eliminates the approval of a critical mass of proposed programs from a single institution.

The economic conditions which have led to the moratoriums on state systems have also affected private universities. The result is that the opportunities for new programs have been greatly restricted. And also critical in this situation has been the lack of support for graduate students. Relatively few of the mature experienced individuals to whom the DA appeals can afford to take extended time from their jobs to work for a degree. And relatively few departments with doctoral programs are willing to stretch their slim resources to encompass a new program, especially when there is a surplus of doctorates in some field. Obviously, the DA degree was started at an inopportune time and its future is uncertain.

Nevertheless, a degree which is now available in at least 21 institutions and 44 departments is certainly not a failure. The 44 departments are spread over 18 fields as follows:

Art, 1
Biology, 4
Business and Economics, 1
Chemistry, 4
Creative Writing, 1
English, 10
French, 1
German, 1
Geography, 1
Government, 4
History, 4
Judaic Studies, 1
Mathematics, 4
Medical Technology, 1
Music, 3
Physical Education & Recreation, 1
Psychology, 1
Slavic Languages, 1

This tabulation, insofar as we could ascertain, was correct as of the date it was made, spring 1973. The 21 institutions include two (University of Illinois, Chicago Circle and Washington State) with programs approved only this spring. Several programs in other institutions were but recently approved and had no students enrolled, and several institutions reported new programs under consideration, which may have increased both the institutional and program numbers by the time this report appears in print. It is aiso possible that some programs will be dropped, as has happened already with economics at SUNY, Albany.

List of Institutions

Ball State University—Music
Brown University—Creative Writing
Carnegie-Mellon University—English, Art, History, Mathematics, Music, Chemistry
Catholic University of America—English, Medical Technology (summer 1973)
Claremont Graduate School—Government, French Studies, Botany
Drake University—English
Idaho State University—Biology, English, Government, Mathematics
Lehigh University—Economics and Business, Government, Psychology
Middle Tennessee State University—English, History, Physical Education and Recreation
Ohio State University—Slavic Languages
SUNY, Albany—English, Economics (recently discontinued)
University of Illinois, Chicago Circle—Chemistry, Mathematics
University of Michigan—English
University of Mississippi—English, Music, Political Science
University of North Dakota—Biology, History

University of Northern Colorado—Biology, Chemistry, Geography, History, Mathematics
University of Oregon—English
University of the Pacific—English
University of Washington—Germanic Languages
Washington State University—Chemistry
Yeshiva University—Judaic Studies.

Some of these programs have enrolled very few or no students. Many have graduated none. A later chapter will report on degree recipients and their reactions. Some of the programs present unanticipated use of the DA, at least this early in its development: Creative Writing (Brown), Judaic Studies (Yeshiva), Medical Technology (Catholic University), Physical Education and Recreation (Middle Tennessee), Preparation for High School Teaching (Carnegie-Mellon), and preparation for any profession requiring knowledge of German language and culture (University of Washington). The most frequently appearing fields (English, Mathematics, Chemistry, Biology, History, and Government) also have the larger enrollments, include many non-majors, and may well remain the most common DA majors.

Interdisciplinary programs are not apparent in the list, but the extent of flexibility in many cases permits an individual to develop much broader approaches both within the discipline and in relationship with other disciplines. This will become apparent in later chapters.

There is, we believe, little to be gained by a detailed discussion of DA programs at each institution. Rather, in subsequent chapters, based upon the ground work laid in this one, we shall discuss the various components of the DA programs, how they are manifested in various programs, and the strengths and weaknesses of the various approaches as a basis for offering some suggestions for improvement.

ALTERNATIVE DEGREES FOR COLLEGE TEACHERS

Extensive and recent discussion of the Doctor of Arts as the appropriate degree for college teachers should not be permitted to obscure the fact that several others have been proposed and at least five other alternatives presently exist. These include at the doctoral level multiple track PhDs, and the EdD (or DEd). Many institutions offer master's degrees in education or in the disciplines which include a combination of some attention to instruction and some further study in the discipline. These 1-year master's degrees may be adequate for employment in community colleges, and baccalaureate level institutions but they are not usually regarded as terminal degrees upon which to base a career in teaching. The 2-year degrees—Master of Arts in College Teaching and Educational Specialist—provide a stronger background and often are regarded as terminal degrees, suitable for community college instruction. The MACT may actually provide more and broader coverage of course work than the PhD, but it dispenses with specialization and with the research dissertation.

The educational specialist for college teaching is an extended use (perhaps a misuse) of a degree or certificate originally used to designate a 2-year professional level of specialization in administration, curriculum, or such technical or specialized fields as counseling, testing, reading, or educational technology. The certificate was intended to be an indication of a high level of proficiency and terminal in nature for persons employed in a number of specialties in public school systems. The reinterpretation of the degree as a teaching degree was, in some cases, an opportunistic attempt by colleges of education desirous of expanding graduate education but not empowered to give the doctorate. Our extensive review and discussions of these developments demonstrated that many faculty and administrators viewed the EdS as upward extension of graduate study and a step toward the PhD (Dressel and DeLisle, 1972). Originally intended as a carefully planned 2-year experience, terminal in nature, many institutions immediately permitted master's degree holders to complete another year of work and receive the EdS. Paths to move from the EdS to the EdD or PhD (pre-

sumably in education) have also been laid out, particularly in those institutions ultimately authorized to give a PhD after having offered the EdS for some time.

Though program specifications usually warn the student not to expect strict additivity in credits when moving through the masters, specialist, and doctoral sequence, the student by some shopping around with colleges and possible advisers may attain just that. On the other hand, if the EdS was undertaken as an alternative to an available PhD or EdD program, the EdS may be officially regarded as a terminal degree unrelated to or certainly not a step toward the doctorate. It is unfortunate that the EdS was extended to provide a degree for teaching. Those acquiring it quickly learn that it has little status in colleges and universities, perhaps less than a second master's degree in another discipline or an MACT. However, this latter interpretation is speculative, based only on informal reactions of a few faculty members and administrators. It is our impression that the use of the EdS as a degree for teachers is not extensive and it would be for the best if this usage were phased out so that these programs might once again serve only and well the purposes for which they were created. Yet, this use of the EdS may have proceeded so far that only a lack of candidates will result in its elimination as a degree for teaching. For example, the 1972 Graduate School Catalog of the University of Alabama, pp. 44-45, indicates that the goals of the EdS are either teaching or professional proficiency. The degree, Educational Specialist in _____, is offered in biology, business administration, chemistry, economics, education, engineering, English, French, history, mathematics, physics, political science, psychology, romance languages, sociology, and Spanish. The degree is regarded as particularly appropriate for community colleges, small private and state colleges, and "developing institutions."

The MACT as a 2-year master's degree also has shortcomings. Like the EdS, it has no ready and recognizable title of address. Were the MACT to be sufficiently widely used over a period of years, it could ultimately achieve recognition such as that accorded a Master of Social Work. The Master of Fine Arts (long the terminal degree in the Arts) exemplifies the same problem. As it is and is likely to be, the 2-year master's calls always for explanation even to denizens of the academic world. Finally, 2-year degrees may not be recognized in salary scales or in requirements for promotion through the ranks. These degrees may suffice in community and technical colleges which frequently do not use ranks and may not recognize the doctorate in the pay scale because it is common only for administrators; they do not meet the need in other colleges and universities.

The Master of Philosophy (M. Phil) and the candidate degree or certificate have been frequently mentioned in the context of teaching degrees. In fact, their only connection is that many individuals who have completed all PhD

requirements except the dissertation (have become *candidates* in the official language of some graduate schools) are given, usually upon request though the response may be routine, a certificate so stating. The University of Oregon Department of English uses the DA in this same way. The individuals are undoubtedly as well prepared for undergraduate teaching as they will be upon completing the typical research dissertation and receiving the doctorate. However, nothing in the program departs from the traditional PhD requirements. The gain is that the individual can show and the catalog reflect what has usually had to be stated by letter or word of mouth (and often with some lack of assurance) that an individual has only the dissertation to complete. Yale University received extensive publicity for the M. Phil. and the University of Michigan and the University of Chicago for the Candidate Degree. Neither seems to have created a band wagon effect, and they are not likely to do so. In any case, the M. Phil. and the Candidate Degree are irrelevant to our immediate concerns. In the long run, even for the community colleges, we believe some type of doctorate will become the preferred terminal degree.

There are presently several doctoral degree possibilities in addition to the DA. Some graduate schools and departments therein have for many years permitted a high degree of flexibility in adapting PhD requirements to the interests and need of individuals. A doctoral committee with a prestigious chairman may permit inclusion of education or psychology courses in a program and authorize an atypical dissertation. But these occasional deviations are likely to be available only to able, persuasive, and perhaps more mature students who are quite explicit about their goals. Such flexibility is not routinely available and any attempt in many institutions to make it so might well result in a return to tight interpretation and rigorous enforcement of the regulations. The sequence is well typified by a department of mathematics which had for many years offered a PhD in history of mathematics. When a change in staff precipitated general awareness of this fact, the department decided that a degree in history of the discipline was not consistent with their interpretation of research. Their decision, which was to offer the EdD in history of mathematics, indicated in a not too subtle way the perceived merits of three fields: history, mathematics and education. The social sciences are more flexible than either the humanities or the natural sciences, perhaps because their disciplines have developed out of study of the problems of the current scene as much or more than out of review of the past, and the development of abstractions and theories based solely thereon. Yet, even in the social sciences, unusual adaptations to permit preparation in depth for teaching are not routine.

A brief discussion of several specific programs will assist in grasping the nature of the adjustments made, and also provide some background for comment on the strengths and weaknesses of the adjustments.

Adjustments in the PhD

The typical PhD program is geared to research and relies on a research seminar approach. These seminar experiences, offered by the graduate faculty who are primarily concerned with scholarship, provide the doctoral student with a limited purview of teaching. He has little or no opportunity to observe outstanding undergraduate teachers or the innovative methods and materials which they are developing or using; and even if he serves as a graduate assistant or teaching fellow, this experience is regarded as a means of support for graduate study rather than as a supervised internship in teaching.

Nevertheless, a number of institutions have undertaken to provide a significant experience in teaching. A 1967 survey by Koen and Ericksen at the University of Michigan (Koen and Ericksen, 1967) indicated that 450 graduate institutions provided courses or experiences directed to the improvement of teaching. Approximately 80 percent of these programs were directed to the PhD; but most institutions that claim to offer preparation for teaching as a part of the doctoral experience are unspecific about the means used.

The most common preparation found is a teaching assistantship, but the typical teaching experience remains essentially that of supervising laboratory work or meeting several classes per week and covering material in patterns well established several decades ago. Educational technology, new conceptions about learning and teaching, and recent developments in course and curriculum development are seldom touched by this experience. Thus patterns of teaching are reproduced unchanged from one generation of teachers to another.

A. M. Heiss reported (1970, p. 233) that the responsibilities assigned to teaching assistants vary widely. In English, French, and mathematics, 23 percent were given complete responsibility; 65 percent devised tests; 8 percent graded papers for their own classes or those of their faculty supervisor; 76 percent assigned final grades; 81 percent kept all records. In the natural sciences (Heiss, 1970, p. 235), 1 percent were given complete responsibility; 37 percent graded all papers; 4 percent devised tests; 9 percent assigned final grades; and 21 percent kept all records.

Heiss (1970, p. 235) reported that ten institutions included orientation meetings, meetings with supervisor, special seminars, and evaluation of the teaching experience. Yet in some cases these are added on to a load of six to eight credits of graduate work which may require so much time as to interfere with any concentrated attention on teaching or activities designed to improve.

Examples

Clark University. Clark offers a PhD in history, geography, and economics which is identical to the regular PhD except that it requires that one of three or four fields be directly related to teaching or a teaching research model and that the dissertation also relate to teaching. The candidates for this degree must also have at least two internships in which they work cooperatively with teachers, parents, high school students, undergraduates and other education personnel on teacher training or curriculum development. This TTT program (Training Teacher Trainees) was started in September, 1969, and in January, 1973, included 17 PhD candidates.

The program has some other interesting and distinctive features which are indicated in the detailed description of the history PhD.[1]

The History Department at Clark has created a pattern of advanced education in historical studies suited to teaching of history in an era of crisis. Special emphases of the program include:

1. Historical perspective appropriate to a global area;

2. Methodology for comparative studies;

3. A framework for scholarly study (based on 1 & 2) culminating in a dissertation;

4. Restoration of keenness of motivation, perception, and human understanding essential to intellectual and artistic creativity;

5. Drawing on related social sciences through interdisciplinary instruction, but with a definite humanistic bias.

The department seeks students motivated by a conviction that history serves the present and looks to the future. The program will (1) be concerned with motivation and sense of direction for students as well as with substance; (2) aim to be as brief as possible (no more than 5 years) including dissertation; (3) lay a foundation for a responsible long-range career rather than train specialists in a limited area of historical competence; (4) be concerned with usefulness, with practically oriented rather than traditional academic emphases; (5) include a dissertation which will emphasize role as judge of historical method, critical intelligence, and

[1]Based on "Introduction to PhD Program in History at Clark University," Summer, 1972 (mimeographed, 5 pages).

literary style rather than as specialist in the subject of the dissertation. Dissertations are to be journeyman samples—not masterpieces.

This PhD program is justified by the department by the following considerations: historical studies are indispensable in advanced study of all social sciences and humanities; more effective teachers of history are needed; the trained knowledge of history has practical use in a great variety of public and private institutions.

A number of innovative processes and goals are featured in the program:

1. Early and continuous orientation of students to the nature of the program;

2. Interdisciplinary, interdepartmental opportunities;

3. Increased and early exposure to use of historical studies;

4. Close relationship to teaching situations: apprentice in undergraduate teaching, joint projects with other institutions, seminars or colloquia on teaching;

5. Comparative approach: understanding of striking divergence of historical approaches;

6. Departmental colloquium to be held every 3 to 4 weeks for a programmed exploration of the comparative approach and as a check on the centrifugal tendencies of specialization;

7. Insistence on quality:

   a. Precision in the comprehension of assigned reading;

   b. Capacity to use assigned readings in general professional discussions;

   c. Clarity, economy, and elegance in writing;

   d. Coherence and control of argument in all written exercises;

   e. Comprehension of relevant factors in any historical problem posed in class or seminar;

   f. Capacity for conceptualization and generalization;

   g. Responsiveness to and grasp of the broader issues raised in the departmental colloquium.

Dartmouth (based on correspondence with Associate Dean of Graduate Studies, James E. Hornig). The Department of Mathematics proposed the first doctoral program at Dartmouth in 1960-61. The program provided increased breadth of course work and a relaxation of the strict new theorem interpretation of dissertation to include expository topics as well as new knowledge. Exposure to assisting in undergraduate teaching was also recommended.

There was some discussion of the possible use of the DA, but the science faculty persuaded mathematics that the program was consistent with the PhD. The latter was approved. Another version is that national colleagues argued that salvation lay in reformation of the PhD rather than in a new program. In fact, the course work and teaching experience has been consistent with the plan, but dissertations have been conventional. Students and professors find it easier to do new mathematics in a well-defined area than to write high class critical or expository work in broader areas of mathematics.

As a matter of passing interest, Dartmouth considered a Doctor of Arts in Humanities in 1970. A planning grant from Carnegie was received, but a combination of factors (doubts about different but equal, admission of coeds, increase in size, year-round operation) intervened; the idea was dropped and the remainder of the grant was returned.

University of Denver. The program includes 12 academic fields offering the PhD. Candidates are required to complete core courses in higher education and a cognate area in a single field outside of the professional educational area. Two tool areas, a dissertation, and the usual examinations are required.

George Peabody College for Teachers (based on a letter from C. B. Hunt, Jr., Dean of the Graduate School). This college offers the EdD and PhD in several areas. The EdD was instituted in 1950 when the graduate faculty thought that policies governing the PhD were ideal and untouchable. Since about 1965, there have been significant alterations in the PhD so that requirements for the EdD and PhD are identical, including a comfortable, though controlled, amount of flexibility. Thus doctoral programs which are highly research-oriented and others which are field-oriented are given with the same labels. Included in these are the PhD in Clinical and Counseling Psychology, the Teaching of Mathematics and Social Science Education, and Musicology and Inner City Education. This Inner City Education program is an innovative interinstitutional (Peabody, Vanderbilt, Fisk and Metropolitan Nashville Public Schools) field-oriented program which trains educational leadership for inner city schools and school systems.

The doctoral program in Teaching of Mathematics is designed primarily to prepare for careers in teaching rather than research in pure mathematics. It provides both breadth of training in mathematics and professional competence in mathematics education.

Dean Hunt also indicated that, based upon extensive contacts, they had concluded that the EdS was most likely to become the accepted degree for teachers in community colleges with the doctorate largely sought by those in or desirous of administrative posts as division chairman, dean, or president.

Massachusetts Institute of Technology. MIT at one time considered the possibility of introducing the DA, but decided to work toward adaptations of the PhD. A PhD program in educational research is now available which is regarded as appropriate for those who expect to teach in college in a single discipline or in an interdisciplinary field.

The student must first be accepted in a department, but he can then request the interdisciplinary program. The program will be proposed to and approved by an interdepartmental committee which is given full authority for the specific requirements. The dissertation may be educational or interdisciplinary research. The program may also include supervised teaching and the design and trial of new courses or curricula.

Memphis State University. This university offers the PhD in mathematics with a concentration in college teaching. An internship of two semesters is required. The dissertation may consist of exposition, compilation, redevelopment or new research.

University of Illinois, Chicago Circle. An internal document obtained from this university described a PhD program not unlike present requirements except that the dissertation would be research into the process of communicating knowledge rather than advancing the discipline itself. The degree has not been authorized as yet.

The degree, which would include experiences with various means of instruction and communication, would be appropriate for teaching or for alternative employment in publishing houses or in development of instructional hardware and software. Maintenance of disciplinary strength was viewed as a serious problem for persons with such a degree and the document proposed that the institution take some responsibility for this by developing special journals and bibliographies, colloquia, in-service courses, newsletters, and intensive summer courses. However, it was also anticipated that these individuals would advance their learning through teaching and continued work in developing new materials and revising courses. Effective communication of a discipline surely requires continuing awareness of its expansion.

University of Montana. The university provides a teacher training option in its PhD program in mathematics. The program emphasizes breadth of subject matter and includes a minor or special competence outside of mathematics, such as biology, economics, computer science, applied mathematics, or statistics. This special competence may replace the foreign language requirement.

The program includes several new courses:

1. History of Contemporary Mathematics;

2. Mathematical Modeling in the Sciences;

3. Several seminar series which deal with applications of mathematics to a variety of disciplines (economics, policy sciences) drawing students and faculty from all segments of the campus;

4. Seminar on college teaching covering observation of outstanding teachers, videotapes of student's teaching, reading and discussion of current problems and points of view about higher education, perspective on the academic world;

5. Current topics seminar involving reading and discussion of mathematical and scientific literature and providing experience in mathematical exposition.

It also includes a teaching internship with special seminars, supervised teaching in lower division courses and apprentice teaching in the upper division with a senior faculty member. The thesis requirement specifies "an original contribution to mathematical scholarship" but can be flexibly interpreted to "survey of a developing mathematical discipline, semi-historical study, solution of a mathematical research problem." Pedagogical or textbook type efforts are not included. The emphasis is placed on demonstration of clarity and logical organization.

Northern Arizona University. A broad-based PhD in botany and zoology is offered to provide a background for teaching lower division biology courses. Prospective college teachers are urged to include relevant education courses which can make up all or part of a cognate field. A College of Education faculty member is included on each doctoral committee. Reading knowledge of two foreign languages is required. A dozen students were reported as enrolled with no degrees granted as yet.

Ohio University. A two-track PhD is offered in mathematics. Specific requirements are minimal so that the student can select a broad range of courses for a nonresearch career such as college teaching. Foreign

language competency is encouraged but not required. The dissertation need not be the traditional research effort but should be worthy of publication and demonstrate ability to understand, organize, and present mathematical ideas of importance.

Southern Illinois University. The graduate council took a stand against the DA and recommended broadening of the PhD. A program in Didactic Mathematics has been discussed. This would permit a dissertation emphasizing understanding of mathematical concepts and methods of teaching higher mathematics.

State University of New York, Binghamton. The PhD is offered with two and three track options in English, History, Chemistry, Germanic Languages and Literature, and Political Science. Others are planned. One option provides a very broad grasp of the discipline to prepare the candidate to cope with the problems of contemporary society.

In Physics, for example, the candidate must enroll for a laboratory research experience (20 hours a week for a semester) in two fields of experimental physics. A teaching internship of 1 year in a neighboring college sharing teaching of an advanced undergraduate course with a permanent faculty member is required. Two theses (in addition to one at the master's level) are required with a successful oral account of each.

State University of New York at Stony Brook. The university has accepted the idea that many of its PhD's will engage in undergraduate instruction and has accepted some responsibility for training to the extent of requiring a teaching experience for all PhD candidates.

Texas Tech University. Texas Tech is on record as not favoring a new degree for college teachers, but encourages departments and programs to stress within PhD programs experiences appropriate to those who wish to become college or university educators.

Commentary

Obviously, these several programs exhibit wide variation in the extent to which modifications in PhD requirements or an alternative track can be developed. The mere authorization, moreover, constitutes no real assurance that students will be permitted or encouraged to take advantage of them. Faculty indifference or antagonism or the possibility of a second-class citizenship resulting from the commitment to teaching present hazards which only the more determined student may disregard. Yet, in the long run, it could well be that the modified PhD will become the accepted degree for undergraduate teachers. The PhD has been so regarded for decades and a more flexible and relevant definition would be far simpler and more readily accepted than any alternative.

Adaptation of the EdD and PhD in Education

The EdD (Doctor of Education) would have been the natural degree to use for persons planning to engage in teaching, but the origins and associations of the designation destroyed that prospect in all but a few institutions. The degree, somewhat analogous to the EdS, originated as a degree for public school administrators, but was gradually extended to include a number of subspecialties within education often uniting two or more areas. Guidance, research, curricular and instructional planning are examples of specialties provided. The EdD has become reasonably well accepted, although it was originally and still is regarded by many persons as a degree of lower quality than the PhD. The original reasons for this appraisal included the presence of "education" in the title, the lack of a foreign language requirement, the functional or problem approach to a dissertation, and the characteristics of the person seeking the degree. *Education* continues, as experiences with the DA prove, to carry undesirable overtones to faculty members in substantive disciplines. The attitude toward foreign language has shifted markedly, and the requirement has been dropped from many PhD programs. The deviation from a research dissertation to a study with practical implications not necessarily research in nature and perhaps less elaborate in extent than the PhD dissertation has been less of a distinctive factor than originally imagined. Dissertations for the EdD and the PhD have, in many institutions, become indistinguishable. In fact, in some colleges of education, the EdD has been abandoned as no longer needed. In the early days of the EdD, a large proportion of those seeking the degree were employed in the public schools and were looking toward administrative assignments. Some colleges insisted for a time that no one could be accepted for the EdD without experience in the public schools. Hence, EdD and PhD candidates tended to be somewhat different in outlook and experience. In those institutions in which both degrees are maintained, there may still be some difference, but it is no longer of major import.

EdD programs have always permitted and usually required some block of credits in a field other than education. This block of perhaps 15-25 quarter hours may be used to develop a teaching field. A few universities, usually those maturing out of a teacher preparation orientation, interpreted the degree as an institution-wide offering and asserted that the EdD could be based in a substantive discipline requiring only that credits in education (perhaps 15) be included in each candidate's program. In one institution reviewed a few years ago, no education credits were required for the EdD. It was in reality a substitute for the PhD. The departments admitted this and also acknowledged that they used the EdD in this manner only because the PhD was not authorized.

Several examples of universities were found which are currently using the EdD to accomplish some or all of the objectives of the DA. A brief summary

of the character of a number of these programs will provide background for a further commentary.

East Texas State University. The EdD is administered by academic subject matter departments with the cooperation of the College of Education. The purpose is to prepare "effective and superior college and university teachers." Both mastery of subject matter and mastery of the art of teaching are required. The program requires 3 full years beyond the baccalaureate. The program presently includes English, Chemistry, and Health, Physical Education and Recreation.

The major of at least 70 to 75 semester hours also includes any cognate field, a course in methods of research, and a dissertation for which at least 9 hours are awarded. A minor of 15 to 20 hours in higher education and related subjects must cover instruction in teaching the major field at the college level, an internship, and an independent pedagogical research project directed by the major department. At least 6 hours of work in the College of Education and at least 9 in special teaching related courses in the department are required. Mastery of research tools is also specified. A foreign language may be included.

At the time of reporting, 35 students were enrolled and three degrees had been granted.

Indiana University of Pennsylvania. Both the PhD and the EdD are used as preparation for college teaching. Both the traditional in interpretation except that an externship and a seminar in college teaching are required.

The institution reports 100 enrolled with four degrees granted at the date of the report.

Kansas State University. The PhD is offered in Education with a disciplinary emphasis in Physics, Mathematics, and Chemistry.

There are no specific curricular requirements, each program being built to meet individual needs. Most students have a practical experience, but it is not required. The dissertation is supervised by a faculty member from the subject matter department and one from Education. Ten students were enrolled, and two had received degrees at the time of our survey in early 1973.

Montana State University. The EdD is offered in Biology, Chemistry, Chemical Engineering, Commerce, Economics, English, Mathematics, Physics, Speech. Other fields are expected to be offered as demands arise. Twelve to 15 students are enrolled on a part-time basis; only two degrees had been awarded at the time data were reported.

The major field for these degrees must be in Education, including Educational Psychology, Foundations of Education, Research and Statistics, and a major area of specialization. The minor can be made up of 36 quarter hours in any department offering graduate courses. The thesis involves investigating and reporting on some significant phase of teaching or school administration.

North Texas State University, Denton. Both the PhD and EdD are given in Education with a major in college teaching. Fields included thus far are Psychology, Industrial and Vocational Education, Business Education, HPER, Music, English, Library Science, Art, History, Foreign Language, Physics.

The requirements specify 60 semester hours beyond the master's including 12 hours of dissertation credit. Education requirements, which include a 2-hour teaching practicum, amount to 24 hours. The remaining 24 hours are in the teaching field. The teaching practicum is in the teaching field although credited in Education. The PhD requires one foreign language, the EdD none.

The institution reported 48 full-time students, 53 part-time students, with a total of 27 degrees (11 PhD's, 16 EdD's) awarded thus far.

Oklahoma State University. Oklahoma State University offers an MS in Junior College Teaching, Educational Specialist degree (designed for Junior College teaching) and the EdD in Higher Education. The latter may be oriented to college teaching. Candidates for the teaching degree take two-thirds to three-fourths of their work in a major discipline and the remainder in higher education. Cooperating departments include: Family Relations and Child Development, Geography, Health, Physical Education and Recreation, Physics, Biology, Chemistry, Mathematics, English, History, Speech, Sociology, Accounting, and Philosophy.

Pennsylvania State University. The EdD is regularly offered in Mathematics, English, and Biological Sciences. The EdD's have also been awarded in Agriculture and Animal Sciences and Technologies, Arts and Humanities, Education, Natural Science, Social Science. Forty-five to 60 credit hours are required at the graduate level in the discipline with emphasis on breadth. Fifteen hours are required in a minor in appropriate education courses (higher education or secondary education). A supervised teaching experience may be required or successful teaching experience may be an admissions requirement. A dissertation is required, but apparently the subject and treatment depend on the department and committee. Generally, however, a solid research dissertation is demanded. Language requirements are left to the doctoral committee and, in most cases, are waived or ignored.

The curriculum for the doctorate in higher education includes a major in general higher education and a minor program for persons interested in college and university teaching. The latter is administered through the student's major department outside of education.

University of Oklahoma. The EdD is offered in Geography and Mathematics, and the PhD is offered in Mathematics Education. A Doctor of Music Education is also available.

* * *

The use of the EdD for preparation of college teachers reflects, as is found with all degrees, considerable variation from one university to another. This use of the degree appears singularly unfortunate to many faculty members; yet its general use and acceptance in such widely separated and well regarded institutions as Pennsylvania State University and Oklahoma State University suggest that it may continue as a viable alternative. Oklahoma State University recently considered the DA as a possible replacement for the EdD and concluded that there were no advantages and some disadvantages. Having developed cordial and effective working relations between basic disciplines and education, a new degree might disturb rather than improve the situation. Furthermore, the EdD has come to be widely accepted and valued in that area, and there seemed to be no reason why the University should embark on the arduous task of defining and interpreting a new degree. Somewhat in contrast, the University of Northern Colorado, where the EdD had long been used, seems bent on replacing it by the DA for teaching in substantive disciplines. The EdD presumably would be returned, to the extent that it relates to teaching, to preparation of individuals interested in teaching special methods in a discipline and in advising and supervision of students majoring or minoring in the discipline in preparation for public school teaching. This use of the EdD is standard in many universities although others use the PhD. Just how the distinction between the DA and this teacher preparation concept of the EdD will emerge in the future is unclear and perhaps of no consequence other than that it would be unfortunate if acceptability of the DA were further endangered by being regarded as identical with an EdD specializing in the teaching of a discipline. One can generalize only so far as to say that the more mature institutions may exhibit greater confidence in their ability to support a satisfactory program in the face of widespread prejudice.

The PhD in Higher Education. PhD's in higher education are typically degrees in education with a significant portion of the program (perhaps designated as the major) in courses devoted to study of higher education problems. In some universities (the University of Kentucky is one example), the EdD is used in higher education as in any other field of education. In a sense, then, the possibility of relating the degree in higher education to

undergraduate teaching retraces the discussion of the EdD and PhD in education. However, the PhD in higher education was originally introduced with a more limited set of goals in mind: administration (financial or academic), student personnel work, teaching and research in higher education programs, and more recently in some institutions, institutional research, and planning. Many programs are sufficiently flexible that candidates may include in their programs significant blocks of credit in one or more substantive disciplines. Finance, business, and the social sciences are often included, but the humanities and the sciences can also be accommodated. In one university we find that the PhD in higher education was already offered in cooperation with Speech and Theater, Physical Education, Biology, Music and that the intent was to broaden this to many other departments. The program was described as a PhD in higher education with a Junior College teaching option. Considerable internal tension had been generated because the DA was also being developed in several departments.

If the candidate's undergraduate major and his master's degree have been in a discipline, an additional block of 15-25 credits can provide a reasonably sound background for undergraduate teaching. Certainly it would be as extensive as that for an EdS and well beyond that of a 1-year master's degree but usually something less than the EdD or the DA or the PhD in a discipline. The degree in higher education may permit somewhat greater flexibility for the individual interested in interdisciplinary study or in a theme or problem approach which would not be accommodated in most departments. Yet, again, this broad interpretation of the degree in higher education, for the purist, savors of a misuse of the degree and possible abuse by faculty and students who are looking for a way to avoid disciplinary rigor and requirements which are designed to assure competency in depth in the discipline. However, as proponents of flexible planning in reference to student interests, capabilities, and vocational goals, we would not entirely rule out this use of higher education programs in universities wherein regulations permit it, and neither the EdD nor the DA is available.

Summary

Those who prize diversity and institutional uniqueness will applaud the range of degree programs which are presently directed to the preparation of college teachers. Perhaps this diversity should be commended and supported. Nevertheless, there are characteristics which cause some concern. Some institutions and faculty appear to have been moved more by expediency and aspiration to graduate programs than by careful analysis of the requirements for college teachers in the several distinctive markets. In the case of some PhD programs, the adaptations may be misleading, either in their inadequacy or in the failure of graduate advisers and faculty to give

full support to them. The diversity of approaches available and the uncertainties as to what they really provide make it difficult for an individual seeking a degree for college teaching to decide where to go. Deans and presidents seeking college teachers are already confused and uncertain as to the significance of the several degrees. In some cases, we know that individuals have suffered a setback in their career because they were not fully aware of the implications of their choice. An EdS or an MACT may be quite appropriate for a community college teacher, but what happens if the individual later aspires to employment in a four-year college or a university and seeks a doctorate? The sequence of degrees and their content, the variation in degree requirements among institutions, and the residence requirements would often result in a total time involvement vastly exceeding that normally required for pursuit of a doctorate in a discipline. Even with the most extensive and accurate program statements and advising, an individual may find it difficult to anticipate the future and choose wisely among the diverse programs. The confusion of the dean of a community college or liberal arts college who must be alert to the possibility that a DA may be the equivalent of a Candidate degree or M. Phil. and that DA, EdD, and PhD applicants from various universities may, in fact, have had almost identical programs, is understandable.

Programs for college teaching are still in a formative stage and continuing experimentation with various types of programs is inevitable. Diversity has long existed in the nature and quality of PhD programs among universities and among departments within universities, but that degree has nevertheless become accepted coin of the realm in the academic domain. It would be desirable if one or, at most, two degrees might attain that same level of acceptance for college teaching. Surely a more flexible PhD on one hand, and a DA on the other, should be adequate as terminal degrees for college teachers. Continuing use of the EdD and PhD in education, and use of the PhD in higher education can only delay recognition of the need and justification for recognition of teaching and research as distinctive fields of practice in a discipline. At a definitely lower level, the 2-year master's, the certificate, EdS, and DAGS again represent a commendatory attempt to provide for a status between the one-year master's and the doctorate but, here again, the surplus of degrees brings confusion. However, in subsequent chapters we are more concerned with the components of a degree for college teaching than with its title.

CONCEPTIONS OF COLLEGE TEACHING

The graduate orientation of the university underlines the importance of the departmental major. Breadth requirements are seen by many students and faculty members as a distraction—a nod to a liberal education tradition not generally understood by and often misinterpreted by the faculty. Some view liberal education as a cultural initiation into the grandeurs of the past; others as related to the events and travails of the present; and still others as preparation for the future. But these distinctions are lost in the dominance of the disciplines as a basis for organizing undergraduate education.

The result has typically been a course-oriented and controlled program. In addition, the departmental organization of the university reproduced in miniature in the college provides a barrier to interdisciplinary, problem, theme, or policy oriented courses and, in particular, to independent study; for independent study, in this context, is inevitably equated to content coverage instead of to the acquisition of competency in defining problems, finding solutions, and evaluating their adequacy. Few faculty members view these objectives as direct results of study of their disciplines. Disciplinary content is more easily covered in existing courses than by independent study. A new breed of faculty is required to energize a new approach to undergraduate education and break it free from the rigidity imposed by the disciplinary orientation of the graduate school.

A recent report stated that lack of good instruction was a major concern of 33 percent of the undergraduates and 46 percent of the graduates surveyed (Carnegie Commission on Higher Education, 1972). The surprise in these percentages is that they are not larger. We suspect that many students have so long experienced unenthusiastic and ineffective teaching that they have no sound basis for judgment of good teaching. There are, too, always nonrespondents in such surveys whose reactions are unknown, but quite likely to be less favorable than those who respond.

There are those who believe that, if teaching were regularly evaluated and rewarded, teaching would be improved. This view is probably over-optimistic. Every evaluator has learned that evaluation other than laudatory comment often provokes only irritation and active disparagement of the evaluation. Others have studied the characteristics of "successful" teachers, hoping to arrive at some bases for selecting good teachers. Still others, in recent years, have argued that effective and extensive use of educational technology will bring the greatest improvement in learning. Our own conviction is that no one of these three—evaluation, teacher characteristics, or technology—will bring a significant improvement unless considerable groundwork is laid in advance.

It seems obvious that more effective teaching is evidenced by *more learning* or by *learning of more difficult tasks* by students. But this apparently is not obvious to those who believe, for example, that good teaching can be appraised simply by multiple colleague evaluation of a lecture emphasizing its scholarship and the niceties of presentation. As we turn attention from what teachers do to what they ask students to do and seek also to learn how well the students actually perform, we have shifted to evaluating the results of teaching. This shift focuses on student learning and opens a new vista on instruction. Students can learn many different things. What they actually learn depends on a multiplicity of factors. Among these certainly are the intents, characteristics, and activities of the teacher, but a more comprehensive model is needed.

A college provides an environment for learning. This environment includes physical elements: grounds, buildings, and equipment. Into this physical environment are fed faculty members with varying personality characteristics, attitudes, and disciplinary specialties. Students of differing backgrounds, aptitudes, interests, and motivations also flow into this environment. Administrators, maintenance and clerical staff round out the human factors. These individuals and groups introduce psychological and sociological factors and also distinctive philosophical assumptions and value commitments.

Institutional goals and educational objectives help to determine the total environment. Ideally, the human components (faculty, students, administrative personnel) would be selected in reference to their commitments to the goals and objectives but, in practice, this seldom happens. The goals and objectives—at least in their specific interpretations at a given time—emerge from the interactions and compromises of many individuals and committees supported by board actions.

In part—but only in part—determined by these goals and objectives, curricula are planned. Forces outside the environment have a major impact, both on the curricula and on specific courses and instructional objectives.

Within each curriculum the instructional objectives of courses are determined, to some extent, by formal specification, but to an even greater extent by the specific instructional practices and learning experiences. Finally, there are both anticipated and unanticipated outcomes from this environment. The relationships are suggested in Figure 1.

In this model, there are many factors, any or all of which can be altered in attempting to improve learning. Faculty members might suggest more careful selection of students or reduction in teaching load. The first would reduce income; the latter would require more dollars. Students and the general public might argue that faculty members should be more carefully selected or be required to give more attention to teaching. More directly, improvement of learning focuses on clarifying objectives, replanning of curriculum and courses, review and improvement of instructional practices and learning experiences. But frequently the curriculum and the courses follow some traditional structure, the recommendations of national committees or professional societies, or emerge from the special interests of the faculty. To a considerable extent, these interact and reinforce each other. Objectives may be ignored in this pattern because the course materials and the specific content are viewed as ends in themselves.

The type and levels of institutions affect the teaching role. The teacher of English in a technical school will be concerned with communication skills, but he will use materials and methods different from those used in a liberal arts college because the motivations and goals of the students are distinctive. The instructor teaching freshmen and sophomores has little need for advanced graduate courses and seminars in subspecialties of his discipline. Those professors who teach only at the advanced undergraduate or graduate level usually attract students with interests somewhat paralleling their own. If a student's motivation is high, he may learn regardless of teacher activity. This does not excuse poorly planned lectures, pointless discussions, disconcerting mannerisms, or speech so soft or fast that students cannot follow.

Teaching roles also vary in relation to the substantive focus operative in an institution, curriculum, or adapted by a professor in his course. Knowledge of a discipline is for some persons an end in itself; others are mainly interested in acquiring selected concepts and principles useful in a career. The discipline may be viewed as a collection of facts and principles, as a set of methodologies or skills useful in amassing and applying knowledge, or as a complex structure made up of concepts, principles, and methods all directed to analyzing and understanding aspects of the physical or biological environment, or the nature of man and his endeavors. Disciplines may also be regarded as fortuitous and disadvantageous ways of organizing knowledge because they do not directly relate to problems of individuals or of society. Accordingly, courses or independent study may be directed to

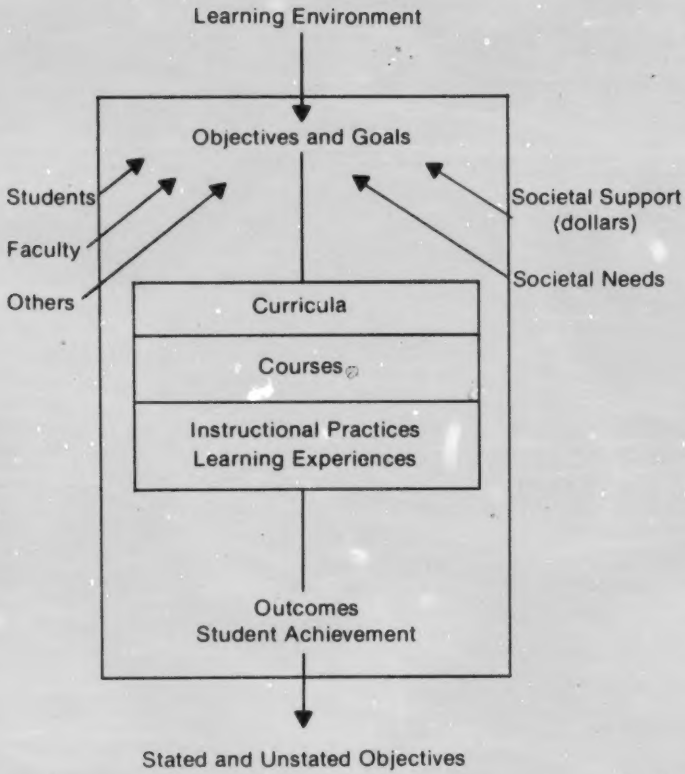
Learning Environment
Objectives and Goals
Students
Faculty
Others
Societal Support
(dollars)
Societal Needs
Curricula
Courses
Instructional Practices
Learning Experiences
Outcomes
Student Achievement
Stated and Unstated Objectives

Fig. 1.

such themes as ecology; problems such as inadequate health care; concepts such as equality or beauty; skills such as writing; particular geographic areas or political units; or some historical era. To view the possible bases for curriculum or course organization in another way, we may characterize at least four:

- user-oriented (teaching of statistics for understanding in context rather than for *doing* statistics);
- content-oriented (ideas, theories, principles important in their own right);
- tool-, skill-, or method-oriented (development of individual abilities in performance and in acquiring knowledge);
- problem- or policy-oriented (analysis and solution of identified problems).

These differences in the substantive focus can change the entire character of teaching and learning. They involve both philosophical and psychological commitments. This becomes apparent as we examine the four continuums described in the following section.

Basic Considerations in Curriculum Development

Curriculum discussions often are preoccupied with means rather than ends, with details rather than structure, and with courses rather than learning. Many hours may be spent stating objectives which are so inclusive, vague, and even inconsistent that no one expects they will be met. It is surprising how similar the stated objectives are for institutions at opposite poles in other respects. Four continuums will assist in clarifying these polarities.

Four Continuums[2]

Figure 2 exhibits four continuums. The *first* contrasts concern for the individual student with concern for the disciplines. If concern for the individual dominates, then objectives emphasize the growth and development of the individual in a wide range of areas and roles. Affective and psychomotor goals are as important as cognitive ones. The disciplines represent arbitrary but potentially useful organizations of knowledge. At the other extreme, the disciplines present the accumulated wisdom of man-

[2]Most of the material from here to the end of the chapter is reproduced from or is a modified version of previously published materials by the senior author, especially *College and University Curriculum*, 2nd ed., (Berkeley, Calif.: McCutchan, 1971).

1. *Individual Student*	*Disciplines*
Personal development	Mastery of content
Behavioral orientation	Structure and methodology of disciplines
Affective concerns	
2. *Problems, Policies, Actions*	*Abstractions, Ideas, Theories*
Competencies	Verbal facility
Present and future oriented	Past oriented
3. *Flexibility, Autonomy*	*Rigidity, Conformity*
Adaptation to individual's needs and interests	Prescribed program and standards based on demands of disciplines and/or "average" student or ideal scholar
Democratic	Authoritarian
4. *Integration, Coherence, and Unity in and from Learning Experiences*	*Compartmentalization, Inconsistency, and Discord in Learning Experiences*

Fig. 2. Continuums Suggestive of Possible Curricular Emphases.

kind and are more important than the individual who merely assimilates them. Most institutions are far closer to the discipline than to the individual approach. A few experimental colleges approach the left-hand extreme.

The *second* continuum contrasts a practical with an "ivory tower" conception of education. At one extreme the curriculum focuses on problems and on policies, actions, and competencies required to deal effectively with them. Such a program, oriented to the present and the future, deals with current and continuing problems. The other extreme emphasizes knowledge and understanding of abstractions, ideas, and theories. Verbal facility in discussing and analyzing these displaces practical ability to use them. The orientation is to the past. On this continuum, disciplines differ as much as professors and colleges. The social sciences are more likely to concentrate on problems, policies, and actions than are the humanities or the sciences. The problem orientation is not readily attainable in a rigid disciplinary-based curriculum.

The *third* continuum contrasts highly flexible, adaptable programs with rigid uniformly imposed patterns. At the left extreme, the student is free to plan his program, state his goals, and set his standards of attainment. At the right, the student conforms to a prescribed program and standards. Only a few experimental institutions aim at the left extreme.

The *fourth* continuum contrasts programs that seek integration, coherence, and unity with those that ignore these qualities. A completely integrated program is both undesirable and impossible. What is needed is a program that encourages and assists the student to organize his knowledge and experience in meaningful ways. The program must cross disciplinary boundaries and relate abstractions and theories to the world of action. At the right extreme, program integration is either considered irrelevant to this age of specialization or regarded as a completely personal and subjective matter. Extreme departmentalization, competition for majors, and complete separation of student personnel services from instruction characterize this not uncommon extreme.

Despite obvious relationships among the four continuums, they are largely independent of each other. Concern for the individual student does not necessarily lead to a problem-oriented curriculum. Flexibility and autonomy in a program do not necessarily result in integration, coherence, and unity. Thus, it is possible, in planning a curriculum, to consciously seek the extremes of these four continuums or to seek some balanced, intermediate position on each.

Essential Elements

In planning a curriculum, several essential elements must be considered in defining the desired position of the four continuums. These include: (1) liberal and vocational education; (2) breadth and depth; (3) continuity and sequence; (4) conception of learning and teaching; (5) continuing planning and evaluation.

Liberal and vocational education are often contrasted and might be regarded as extremes on a fifth continuum. However, the problem is one of balance rather than of incompatibility. A liberal education that results in (1) knowledge of basic cultural heritage, (2) competence in utilizing the modes of thought characteristic of the major areas of human knowledge, (3) competence in communicating, and (4) conscious commitment to a set of values is excellent preparation for almost any vocation that requires post-secondary school education will, to some extent, require these characteristics. Furthermore, all vocational training is soon outdated. The vocational student must learn to exercise independent judgment and to educate himself. Thus, to some extent, vocational education can and must be liberal.

Breadth and depth, like liberal and vocational education, are sometimes regarded as antithetical. Breadth includes such diverse interpretations as:

1. Knowledge of essential facts and concepts in all major areas of knowledge;
2. Understanding of the structure, basic concepts, and modes of thought of the various disciplines;
3. Awareness and understanding of those ideas and values that have had a marked impact on the development of Western culture;
4. Understanding of the values and modes of thought of one or more non-Western culture;
5. Awareness of the interrelationships of disciplines;
6. Insight into and active concern with the major problems of our society;
7. Commitment to a set of values and conscious attempt to reinforce them by thought and action.

Distribution requirements seldom go beyond the first interpretation, although they could and should contribute to the second and third. Introductory interdisciplinary courses vary and are difficult to type. The majority are most effective in the first and third interpretations, but a few have been quite effective in the second, fifth, and sixth. Some courses in non-Western cultures are specifically designed to meet the fourth interpretation.

No significant concept of breadth can be attained in isolated freshman and sophomore courses. Some sequence of courses is required to deal effectively with values or the relation of the disciplines. There must be *depth in breadth*. Otherwise, breadth yields, at best, a superficial and temporary acquaintance with some names, dates, and ideas; it will not desirably affect the judgments and actions of the individual.

Depth is usually interpreted as a departmental major, although broader conceptions implied by the term "concentration" are also used. Depth can mean any of the following:

1. Detailed knowledge of the facts and terminology of a discipline;
2. Knowledge of the language, culture, politics, economics, and geography of a country or region;

3. Sufficient mastery of the structure and methods of scholarly investigation to engage in independent study in a discipline;

4. Thorough investigation of a problem, of the information and methods of attack required to deal with it, and of the implications of various possible solutions to it;

5. Study of all aspects of the culture of a designated place and period;

6. Mastery of some methodology or technique (e.g., statistics, laboratory analysis, musical instrument, art medium, computer).

The departmental major is too broad for some of these conceptions of depth and too specialized for others. How much specialization is appropriate at the undergraduate level? It becomes important to consider the relevance of *breadth in depth*. Many departments require certain basic courses of all majors, as do many business, engineering, and vocational programs. Such requirements recognize the need for a common background of knowledge or skills essential for disciplinary subspecialties. If these common experiences emphasize values, historical and philosophical considerations, interrelations with other specialties, and impact on society, they involve breadth which makes the specialist more sensitive and more adaptive in fulfilling his role. Clearly, depth and breadth are counter-balancing elements in the development of a sound program.

Continuity and sequence are closely related terms. Continuity implies that terms, ideas, and skills introduced early in a program continue to be used. Sequence implies that learning experiences at any time relate to preceding and succeeding experiences. In mathematics and the sciences, this is almost inevitable, for these disciplines are sequential and cumulative.

Advanced courses in the humanities and social sciences usually differ from preceding ones in two respects: (1) they cover shorter spans of time, fewer authors or ideas—in a word, they are more specialized, going into greater detail in a narrower segment of subject matter; and (2) they make more use of primary sources. The materials may be less accessible and more difficult to read, but not necessarily more difficult in any intrinsic sense. Thus, capable students may enroll in advanced courses without prior course work.

If education is to be a connected, developmental experience, continuous use of fundamental knowledge, skills, abilities, and values is essential. Later experiences must relate to and extend earlier ones. Sequence results from the intrinsic nature of the field of study when the student must acquire certain skills before he can progress to the next level. Sequence may be contrived by presenting a course in American colonial history so that a detailed knowledge of European history is required. Thus, the student

realizes that courses aren't isolated entities, and he seeks to understand and use their relationships.

The concept of integration is a natural extension of continuity and sequence. Students are often required to learn constructs developed by their teachers, but an *integrating* program will assist the student to interrelate his various fields of study and his academic study and personal, social, and world problems. The latter seems more fundamental, for it encourages the student to seek relations between current and previous experiences and thereby achieve greater insight and unity in his life.

Within a discipline, integration is closely related to the sequential and cumulative nature of learning; for, to the extent that later learning experiences depend upon earlier ones, some integration is inevitable. Integration across disciplines can be expedited by attention to the role of common concepts or tools, such as symmetry or systems of classifications. Integration is also promoted by attention to problems in which several disciplines interrelate to provide insights and understanding. Integration is also encouraged when students can see each course as contributing to the development of competencies that transcend the separate experiences.

Every effective curriculum study requires some clear conception of the relation of *learning to teaching*. Professors tend to concentrate on the subject matter or content of a course and view student inadequacy as lack of motivation and application rather than as lack of stimulation. The professor accepts little responsibility for long-term educational goals. A good curriculum provides a structure both for learning and for instruction, and must be based on an understanding of human learning and of the resulting obligations of teachers. A liberal education rarely results when even excellent teachers operate in complete isolation from one another.

All curricula change, but most curriculum planning is a series of concessions to vested interests and emotional reactions rather than a comprehensive, rational attempt to achieve certain goals. A new curriculum is evaluated (if at all) only after it is fully developed, and even then evaluation is more likely to be regarded as a threat than as a means of improvement. Only if faculty members regard a program as merely one possible approach to desired ends will *continuing planning* and *evaluation* be acceptable.

Every curriculum study must consider liberal and vocational education, breadth and depth, and continuity. Every curriculum must also be based on some concept of learning and teaching. Since every curriculum will change, the curriculum must include policies and procedures for continuing planning and evaluation. Ideally, the curriculum will emphasize some of these concerns and minimize others in response to conscious commitment to certain objectives. The distinction between breadth and depth may seem

less important if the two are seen as interrelated. Liberal and vocational education confrontations may be minimized if both are committed to the same goals. If student learning becomes the major concern, arguments about teaching methodology may change to discussions of what experiences enhance specific learnings.

Facilitating Agents

Facilitating agents should give to a curriculum the character implied by choices of points along the continuums and of essential elements. These agents, however, are means rather than ends in themselves. The agents include:

1. Requirements, recommendations, electives;
2. Various modes of organizing learning and teaching:
   a. structured courses requiring regular class attendance;
   b. relatively unstructured seminar experiences;
   c. tutorials, individualized instruction;
   d. independent study;
3. Noncourse experiences:
   a. on campus (work, student activities, community government);
   b. off campus (work, travel, service, independent study);
4. Daily and weekly schedules developed to enforce certain standard practices or to permit and encourage various combinations of learning and instruction;
5. Annual calendars that require or permit marked variation in the organization of learning and instruction at various times of the year;
6. Examinations, grades, records of student achievement;
7. Numbers of different courses (or other learning experiences) taken by students or taught by the faculty;
8. Selection, initial orientation, and advising of students;

9. Selection, initial orientation, in-service education, and evaluation of the faculty;

10. Administrative organization and financial and budgeting practices.

The choices and combinations of these alternatives give to the curriculum its overt structure and character. On the basis of these, students, new faculty members, and outside observers judge the institution's philosophy of education and specific objectives. Yet these decisions do not necessarily describe, result from, or contribute to the objectives and rationale of a program as elsewhere stated.

A few comments on the relation of facilitating agents to essentials and continuums will suffice to demonstrate this. Requirements, for example, can have significantly different implications. The imposition of a course requirement is essentially different from the specification of a proficiency requirement which may be fulfilled in other ways than taking a course. Colleges impressed with the virtues of study abroad, off-campus work experience, or community service have added these agents without considering continuity and sequence. New programs of independent study, library research, and ungraded courses may only increase incoherence for both faculty and students. Some well understood unifying structure must be provided to relate the experiences to the objectives to be achieved.

Flexible weekly or daily schedules and variant annual calendars permit combinations of learning experiences not possible in the traditional 50-minute period and 2-semester or 3-quarter calendar. Yet, such innovations cannot be successful if course-credit requirements remain rigid.

Examinations and grades have been discarded because it is feared that they interfere with learning. If only highly motivated students are admitted, and if only inspiring faculty members are hired, structures and checks may be unnecessary. In most institutions, motivation and continuing appraisal are essential. Even in Great Britain, where the final paper has always been the basis for the award of degree and honors status, the new universities accept the necessity of continuous evaluation.

Facilitating agents provide alternative ways of offering or organizing educational experiences, but sound decisions can be made among them only when the total educational experience of the student is viewed in relation to the extent to which the agent facilitates attainment of objectives by that student.

Principles of Learning

The preceding discussion has implied that the structure imposed by the disciplines and faculty commitments based on them fail to give adequate attention to reasonable and important student concerns and interests. Basically, this organization based on disciplines is an arbitrary structure imposed by past and continuing efforts to organize accumulating knowledge in some meaningful way. The organization may be effective and efficient if one accepts its compartments and undertakes to master disciplines as they exist. It is not effective if individuals are concerned with the current problems and issues which they face personally or as a member of society. People can do many things, and learning is not usually the easiest or most pleasant. Significant learning is unlikely to take place when the prospective learner is indifferent, alienated, or actively antagonistic. Effective teaching requires awareness of the principles of human learning. These can be summarized briefly at a rather general level.

1. If the student defines his goals and plans his own learning, he is more likely to be motivated to completion of the task and to a high standard of performance. If the student is released from artificial requirements of traditional college terms, the responsibility and involvement can be further increased.

2. If the learning situation is planned so that it corresponds closely to situations in which the learning objectives are to be used, transfer will be eased.

3. Learning is more effective when the student actively responds by demonstrating his knowledge and skills rather than when he passively assimilates information without opportunity for practice.

4. Learning is facilitated when the student finds rewards at various stages in the process. Mastery—evinced most potently in the ability to use what is being learned— is such a reward.

5. Some modes of instruction—lectures and demonstration—can serve a significant role as motivators and reinforcers of learning already attained. Testing or a tutorial relationship on demand with immediate feedback of the results is an important factor in the learning process. Evaluation should be used in a positive sense as a reward rather than as a punitive terminal appraisal.

6. Specific learning objectives, either developed by the individual or accepted by him as directives for learning, play an important role in motivation, in planning learning experiences, and in evaluating progress.

7. Objectives also provide a basis for organization of facts, principles, skills, and abilities into a structure which gives added meaning and facilitates mastery by increasing the meaning and relevance of what is being learned. Especially is this true when the ultimate objectives require the attainment of numerous intermediate objectives.

Objectives

Consideration of objectives and their attainment by students focuses attention on the results of an educational program. These results are more complicated than the phrase "student achievement" implies. Many objectives are cognitive in nature, and some educators feel these are the only ones of consequence. Although knowledge and patterns of thought are important, not all knowledge is of equal worth. Critical thinking and judgment necessarily involve attitudes and values. Thus, although one may argue that institutions should not specify particular attitudes and values, concern about affective outcomes is unavoidable, because values affect thoughts and judgments. Psychomotor outcomes are also important. Speech involves a complex coordination of mind and body; writing involves certain physical skills. In many professional fields, physical dexterity controlled by knowledge and judgment is essential to performance. Statements of these cognitive, affective, and psychomotor outcomes constitute the objectives of a program. There may also be unanticipated outcomes. A student can have an apparently beneficial educational experience, yet derive from it a highly undesirable outcome. A social scientist who emphasizes analysis and the importance of suspended judgment and who is unwilling to make value commitments, may unwittingly encourage students to avoid the uncertainties and irrationalities of community affairs and politics. Even the process of evaluation itself may influence results. Comprehensive examinations that emphasize isolated information cause students to learn isolated information. Evaluation instruments that attempt to assess attitudes, beliefs, or values may force students to give dishonest responses.

Evaluation of a curriculum may appraise the changes (desired or unanticipated) in individuals or a group that result from the experiences. The rationale for this approach is that the basis for evaluating the worth of any program must be its impact on the students for whom it was designed. The implicit assumption is that, if the changes observed are not in accord with reasonable expectations or if they are unanticipated and undesirable, the program of experiences and the instructional practices must be modified to bring about a harmony between expectations and results. This approach raises many problems. First, the concern with changes in students or with student achievement may shift attention from evaluation of the curriculum to evaluation or grading of students. The responsibility of the faculty for

motivating students and for informing them of their progress toward clearly defined objectives may be ignored. Second, an evaluation program that only accumulates evidence of student competencies over long intervals of time abets the faculty tendency to teach courses without regard for students' experiences or long-term educational goals. The evaluation program does not pressure them to do otherwise. Third, lack of congruence between anticipation and outcome may result from environmental conditions or from a disparity between actual and planned experiences. Objectives, if they are to provide guidance to faculty in planning experiences and to students in focusing and directing their learning should be phrased in competencies to be developed in and demonstrated by the student. The following are suggestive though certainly not definitive:

Competency 1. The student should know how to acquire knowledge and how to use it.

1. *Clarification:* "Acquire knowledge" includes utilization and evaluation of source material, firsthand observation, analysis and interpretation of data, experimentation, interviews and discussion; "How to use it" includes evaluation of accuracy and relevance of evidence, solution of problems, explanation of events, analysis of possible courses of action, prediction.

2. *Range of application:* Applies to problems in all areas of activity (vocational, social, personal).

3. *Relevant learning experiences:* Independent study, community service, team learning experience, study of current problems, special projects, writing requirements.

4. *Evidence of accomplishment:* The learning experiences provided should offer opportunity for assessment of competency through observation of the process or analysis of the result (paper, laboratory report, art object, etc.). This assessment may be viewed at three levels: (a) determination of whether and to what extent individuals have had experiences appropriate to the development of the competency; (b) study of student participation in each such experience to see if it requires and contributes to the development of the competency; (c) assessment of the extent to which individual students demonstrate the competency. If neither (a) nor (b) occurs, then any results found as part of (c) are fortuitous.

   The assessment required in (c) necessitates a clear definition of what is involved by the competency. For example, the report of an independent study project may be read to determine whether it reveals use of

sources, observation, experimentation, etc.; it may also be read to determine how the knowledge gained was applied.

If the range of learning experiences is too limited or too theoretical, comprehensive assessment may require some additional tasks from which evidence of competency can be collected. Since this competency is too complicated for satisfactory assessment in an hour or two, it is desirable to review the evidence before the student's last quarter in school so that any additional task could be incorporated into that final quarter, rather than being added as part of a final comprehensive examination. A senior thesis or a senior independent study project might provide a significant part of the evidence required.

Competency 2. The student should have a high level of mastery of the skills of communication.

1. *Clarification:* "High level of mastery" includes being perceptive in acquiring information and assessing attitudes, accurate in using technical vocabulary, facile with the grammar of the discipline, adaptable to audiences, flexible in style, constructive in criticism.

   "Skills of communication" includes reading with facility and critically both popular and scholarly materials, listening in formal and informal situations, speaking to large assemblies and small groups, writing formal research papers and critical essays, discussion and dialogue.

2. *Range of application:* Applies to problems centering around communication associated with nonacademic and vocational activity as well as with the academic program.

3. *Relevant learning experiences:* Reading (analysis and evaluation of newspapers, magazines, and scholarly or research papers); listening (lectures, interviewing, and small group discussions); speaking (reading a formal paper, class recitations, small group discussions, debates, and dramatics); writing (technical reports, classroom papers, critical analyses).

4. *Evidence of accomplishment:* Since a student is always communicating with either himself or others by reading, listening, speaking, or writing, evidence of accomplishment must be gathered at various times and under many different conditions. The following questions may, therefore, be appropriate: (a) How many significant points can a student recall from a lecture he has just heard? (b) How accurate are the data he gets from observation or from an interview? (c) How reliable are his perceptions of phenomena, of attitudes of speakers, of interviewees, and of peers? (d) How well organized and how clear is his

formal expression? (e) In how many different situations is he able to accomplish (a) through (d) at a high level?

Many opportunities exist for observing communication skills. Perhaps the identification of specific activities in the residential colleges can be made and then related to the desired communication skills. The specific conditions of observation need to be stated, and some new activities may have to be developed. It should be noted that the nature of the communication pattern is important in revealing the quality and amount of communication and in providing evidence on all of the five other competencies which can be observed and assessed only as the student communicates them by word or action.

Competency 3. The student should be aware of his own values and value commitments and realize that other individuals and cultures hold contrasting values which must be understood and, to some extent, accepted in interaction with them.

1. *Clarification:* This statement assumes that most individuals have a set of values (even if only that of currying favor and avoiding difficulty by accepting, or appearing to accept, the values of those with whom they are in contact at the moment), but that they are not always conscious of their values because these either have been assimilated as behavior without recognition as values or have become habitual because of precept and prescription without consideration of alternatives. It also assumes that (a) values are largely culturally determined; (b) there are no absolutes; (c) meaningful interactions among individuals and cultural groups require a degree of understanding and acceptance rather than mere tolerance.

"Be aware of" means to be conscious of, willing to attend to, and concerned about. "Values" refer to the bases, considerations, or points of view (conscious or unconscious) given priority through actual choice or action in situations where differing values dictate differing choices of actions. "Understood" means that the contrasting values are known; these alternative values are recognized as contrasting; the implications of these values for thought and action are sensed, at least in part; the origin, development, or justification for these alternative values is grasped. "Accepted" means that the values of other individuals and cultures are not rejected out of hand as untenable or wrong because they differ from our own; respect is accorded to the individuals and the culture in which these values are imbedded, even though some of the values themselves are regarded as unacceptable. "Interaction" refers to reading or writing in which the individual confronts or is confronted by the necessity of sympathetic and rational

treatment of the views, customs, and actions of individuals with contrasting values; speaking or discussion in which there is face-to-face contact and verbal interchange; cooperation with; offering or receiving assistance from.

2. *Range of application:* Applies to all activities engaged in by the student. This does not mean that individuals should become so self-conscious and introspective about their reactions and thoughts as to become incapacitated for action. It does mean that the constraints and sanctions of the student's immediate associations often generate views, attitudes, or behavior without his conscious attention to the values they support, or are interpreted by others as supporting. Adherence to social mores and personal habits is efficient and often permits time for more significant thought and pursuit of deeper meaning. Yet the life that is unexamined in detail may become unexaminable in any fuller, more complete sense. Acceptance of value differences also opens the way to valuing the worth and dignity of the individual and his originality and creativity, which, along with critical inquiry, are basic value commitments of higher education.

3. *Relevant learning experiences:* The range of application of this competency is limitless. Any experience, whether in or out of class, on or off campus, can have relevance. Some will be more effective than others, however, because they confront the individual with a situation in which the values revealed are so different that the implications and impact of value differences cannot be ignored. With some individuals, differences in speech, food, dress, esthetic standards, use of leisure time, politics, religions, and so forth, such as those found among students from various parts of the country, will serve as the initial stimulation. For others, some probing into the rationale for personal views and those of other students and professors may be required. In order to sense fully the importance of value commitments, an individual may require something of a "culture shock," such as is attainable only by attempting to live in a community of a very different pattern from that to which he has become accustomed. Although courses and other structured experiences may be expected to make some contribution to value consciousness and motivation analysis, community service, team learning experiences, and study abroad are likely to have even more effect. Activities involving the cooperation and interaction of students from residential colleges with differing emphases may contribute significantly to this competency.

4. *Evidence of accomplishment:* The learning experiences provided should offer opportunity for assessment of the competence through observation of the process or analysis of the result (paper, laboratory report, art object, etc.). The assessment should include determination

of whether individual students have developed awareness of their values; awareness of value differences and conflicts among their immediate associates; knowledge of cultures with greatly contrasting values; a concern that their own actions support values in which they believe; ability to recognize and take account of differences in values as a basis for understanding the views and behavior of others; acceptance of and willingness to be exposed to value differences; concern for and recognition of originality and creativity, both in themselves and in others.

Competency 4. The student should be able to cooperate and collaborate with others in studying, analyzing, and formulating solutions to problems and in taking action on them.

1. *Clarification:* This competency is closely related to the first one which places the emphasis on the individual's ability to acquire and use knowledge and relate it to problems. That does not bar the individual from seeking the assistance of others or collaborating with others, but demands that he have the first competency in his own right. This fourth competency, on the other hand, is explicitly concerned that the student, having achieved the first competency in some measure, also has the ability to cooperate and collaborate with others. This is important because the very nature of democratic society and its associated technology places increasing emphasis on the ability of individuals to relate themselves effectively to others and to find their self-realization in doing so, rather than self-obliteration. This competency is also closely related to the second competency (communication) and the third (values). Effective communication is essential to and evidenced by cooperation and collaboration. Effective cooperation and collaboration depend upon valuing other individuals and capitalizing on the individuality and creativity of each.

"Cooperate" implies joint action, concurrence, agreement, personal contribution, and compromise. "Collaborate" means to work together, to act jointly, to agree upon a division of labor and the procedure for combining individual efforts into a single product. "Cooperate" and "collaborate" are both used here with the view that collaboration involves more active participation in accepting the worth of group effort and in contributing to it than does mere cooperation, which may involve only relatively passive acceptance of what is done by others. "Study" connotes the acquiring of knowledge by some systematic investigation, involving more than rote knowledge. It includes continuing concentration to the point of understanding and accepting some concern for application or use. "Analysis" as here applied to problems involves not only the separation of the problem itself into its constituent elements—that is, the isolation of the central issue and related ones and

the identification of assumptions, factors, and possible causes—it also includes the recognition of opinions, relevant facts, materials, and principles that may be called upon in understanding and developing solutions to the problem. "Action" has a wide range of meanings, depending upon the nature of the problem and the range of persons or factors involved in it. If the problem is one that concerns only the students in the team investigating it, the necessary actions may be very clear and emerge almost immediately from the fact that a solution has been agreed upon. If the problem involves the college or the residence hall, it may be incumbent upon the group that determines a solution to engage in the necessary interpretation and political activity to persuade the larger group to accept the solution.

2. *Range of application:* Applies to problems in all areas of activity (vocational, social, personal). Problems may arise in preparation for courses in the college, in the laboratory, in the determination of college policies, in the residence hall, or in the society at large.

3. *Relevant learning experiences:* Team or group projects and reports, committee assignments in college or residence hall, community service projects, seminars involving divisions of labor in study and analysis of a problem, surveys.

4. *Evidence of accomplishment:* The learning experiences provided should offer opportunity for assessment of the competency through observation of the process or analysis of the result. The result here, however, is a composite of the contributions of several individuals rather than the work of one. It may not be possible to determine the extent and nature of a single individual's collaboration in the final product. Therefore, assessment will need to include (a) determination of whether and to what extent individuals have had experiences appropriate to development of the competency; (b) study of student participation to see if it actually uses and strengthens the competency; (c) observation, self-appraisal, or group-appraisal of the extent to which individuals contribute to the group effort substantially and dynamically.

Since this competency emphasizes cooperation and collaboration; the primary concern is with the individual's ability to facilitate group deliberation, task allotment, and synthesis of the individual skills involved. In the first competency, individual skills are involved. Here the concern is with the effective pooling of individual resources to accomplish a task which either could not be performed by an individual or would not be done as efficiently or effectively on an individual basis.

Competency 5. The student should have an awareness of, concern for, and sense of responsibility about contemporary events, issues and problems.

1. *Clarification:* "Awareness," "concern," and "sense of responsibility" indicate successive and cumulative levels of attention. "Awareness" simply connotes knowledge that events are occurring or have occurred, or that certain issues or problems exist. "Concern" involves conscious direction of attention to these events and some degree of regard, solicitude, or anxiety about the implications or outcomes. "Sense of responsibility" indicates acceptance of some personal obligation for assessing the implications of events and contributing to the resolution of issues or solution of problems.

   "Events," "issues," and "problems" indicate a range of matters requiring attention to and involvement in society. No one can be aware of all events, but the educated person must be aware of those that have significant implications for society and his successful performance in it.

   Politics, sports, catastrophes, and developments in medical science are all relevant. Issues are frequently timeless, but events generate new issues or new aspects of issues. What are the moral and legal implications of human organ removal and replacement? Problems likewise may be current (open housing legislation) or timeless (equality and justice for all).

2. *Range of application:* Includes problems of all types, but does not imply that every student is expected to be equally aware of and concerned with all. His range of concern probably indicates the extent to which his education is perceived as relevant to his total role as a person.

3. *Relevant learning experiences:* Awareness, concern, and responsibility are not readily inculcated by learning experiences specifically developed and directed to those ends; rather, they result from (a) projection of a program or college image that attracts students more concerned with problems than with mastery of a discipline; (b) a faculty that demonstrates, in and out of class, that it is alert to and concerned about events outside academe, and that education is viewed as useful only as it is relevant to and contributes to the improvement of the life of the individual and society; (c) viewing all experiences, decisions, and actions in reference to their ultimate results and the values they appear to support; and (d) a continuing mental and physical oscillation between the disciplines and individual concerns; between ideas and theories and the problems or issues they serve to illuminate or explain; between the isolated item of data or discrete fact and the essential but

elusive unity and interrelationship of all knowledge in the life of the individual.

Almost any learning experience can provide opportunity for development of this competency if it is a continuing and conscious concern of the professor and if he insists that it also be a continuing and conscious concern of the student. Group discussions of contemporary issues will assist in this development by encouraging students to express concerns and permitting them to examine the implications of these issues personally as well as socially.

4. *Evidence of accomplishment:* The nature of the relevant experiences suggests that evidence of accomplishment may have to depend largely on observation and subjective appraisal. It would be possible to administer a test of contemporary affairs or a specially prepared current events test, but knowledge, although it indicates awareness, does not demonstrate concern and responsibility.

   This competency also is related to all of the preceding ones. Concern and responsibility will be evidenced to the extent that a student acquires and uses additional knowledge about an event, issue, or problem; develops and exchanges his views with others; cooperates and collaborates with others in study and in action; identifies the values involved in various views about or results of events, issues, or problems and relates these values to his own. Thus, the most significant aspect of the fifth competency is that it requires the other competencies to be related to the contemporary scene. Evidence of accomplishment, then, is to be sought by (a) appraisal of the extent to which the total college program promotes attention, in class and out, to contemporary events, issues, and problems; (b) determination of the extent to which students engage spontaneously in communications and actions about issues and problems; and (c) determination of the extent to which individual students demonstrate awareness and concern and have taken some responsibility for formulating a personal point of view and taking action on some issues or problems.

Competency 6. The student should be able to relate his development of competencies into a coherent, cumulative, and somehow unified college experience and to apply these competencies to his further development as an individual and to fulfillment of his obligations as a responsible citizen in a democratic society.

1. *Clarification:* The length, concepts used, and the reflexive nature of this statement in relation to the preceding competencies make it evident

that this is a complex capstone competency, the central significance of which lies in its integrative implications. "Coherent" implies cohesiveness, consistency, interrelatedness, connectedness. It emphasizes that college experiences—at least those planned, organized, or generated by the college—are congruous with each other and mutually complementary rather than inconsistent and conflicting. "Cumulative" means that experiences are additive and integrative; that earlier experiences provide the foundation for later experiences which simultaneously build upon and bind together the earlier experiences in the achievement of new levels of insight and competency. "Somehow unified" suggests that the desired unity or integration is, in great part, an individual accomplishment that is neither fully predictable nor describable.

In sum, this competency implies that the individual finds a sense of accomplishment and satisfaction in his progressive increase in competencies, which he sees as ever more relevant, both to scholarship and to life. Thus, his college experiences in these competencies accumulate and produce a unity, peculiar to him, that provides self-confidence for the work ahead.

2. *Range of application:* If this competency is to be attained, it must be a concern in each and every aspect of the student's experience. College life in its entirety must be examined stage by stage, retrospectively and especially prospectively, if the student is to sense progress and see an essential unity in his cumulative experience. Perception of incongruence and inconsistency becomes a challenge to seek for coherence rather than a disheartening discontinuity in experiences.

3. *Relevant learning experiences:* Periodic student self-evaluation of progress will assist in organizing experiences and assessing their impact. Advisers may assist in this process. The expectation of such self-evaluation will encourage planning and conscious selection of experiences and attention to this contribution to development.

   Involvement of students as individuals and in groups in evaluating the impact of the college will also focus attention on this competency.

4. *Evidence of accomplishment:* The student who raises questions about relationships between current studies and past ones or who seeks to apply his knowledge to current problems displays a tendency to exercise this competency. Conversations, papers, and actions can all be examined to see to what extent a wide range of relevant ideas or concepts is brought to bear on a problem and the extent to which there is awareness of the values involved.

Summary

The four continuums and the immediately preceding comments about objectives should suggest that it is not fruitful to describe and attempt to evaluate teaching styles and methodologies. Some teachers focus on content, others on the student, and still others on themselves. Some teachers emphasize only intellectual outcomes while others encourage the display of affect. Lectures—formally presented with limited opportunity for questioning by the student—represent the most common experience of undergraduates in large universities and probably in many small liberal arts colleges. Professors are prone to this behavior because it presents the simplest and most obvious way to demonstrate scholarship. Even when professors use such terms as recitation, discussion, seminar, independent study, and encounter groups, the chances are that each of these is, in practice, dominated by the teacher and may, in many cases, be little more than lectures with brief interruptions. There is no answer to the question of the best method, although, according to some reviewers of research, small classes and discussions may be more effective for promoting problem solving, retention, motivation, and attitude change. Whether the higher costs justify the small gains and whether these are even educationally significant, we do not know. Teacher characteristics are no more definitive of good teaching than methodology. What is required is that teachers become clear about what they want to accomplish relative to the kinds of students they teach. We argue that teachers need to become self-conscious about their teaching and seek to modify it in reference to results. The following statements summarize this view:

- Teaching for certain ends implies specific behavior chosen because of seeming relevance to those ends.
- Teaching style can be analyzed, altered, and improved.
- Teaching is a complex behavior involving thought, communication, and physical action integrated.
- The teacher needs opportunities to observe and analyze various styles of teaching, to analyze and evaluate his own teaching, to analyze students' learning processes in reference to the experiences provided.
- Teaching requires a strategy and techniques for organizing materials and experiences.
- Teaching requires some basic foundation in psychological and sociological concepts and principles.
- Teaching requires mastery of those methods especially relevant in attaining certain objectives in certain disciplines.

- Since teaching ultimately must focus on student learning, all teachers need to participate in interdisciplinary seminars for discussion and analysis of problems of teaching and learning.

- Every teacher should have an intern experience related to courses at different levels and it should be planned sequentially to provide variable activities and responsibilities.

The undergraduate teaching role includes teaching in a variety of modes in classroom, laboratory, field trips, independent study, and informal contacts. Course and curricular planning, development of reading lists, reading materials, exercises, and procedures for evaluation are immediate extensions of that task. The role of the teacher as a model of a person knowledgeable in a field but able and interested in relating that field to the current scene and to individuals therein is terribly important for the undergraduate. The teacher also serves as an adviser and perhaps occasionally as a counselor to students. This requires that the teacher's perception extends well beyond his own courses to encompass the meaning of a liberal education and the ability to interpret it to the student in reference to both his immediate program and future goals.

Ultimately the teacher's obligation is that of assisting students to learn, to pursue learning on an increasingly independent basis, and to encourage and facilitate integration and ability to apply what has been learned to enhance personal living and contributions to society. Essential and important as scholarship in one or several related disciplines is for teaching, it is only one component of the insights, abilities, and commitments required for a good teacher.

Programs for the preparation of college teachers have seldom started with any careful analysis of objectives, or of basic assumptions and principles for course and curricular planning and delineation of instructional practices. Since our own discussion and critique of these programs inevitably proceed out of convictions regarding educational objectives, the intrusion of this chapter seemed essential to provide a common background of understanding. We would also argue that every prospective college teacher should be exposed to the ideas and points of view here presented; and no faculty is ready to revise the PhD or to develop a DA for college teachers until it has, at least, considered the nature, responsibilities and various resulting conceptions of teaching. Capable and challenging presentation to highly motivated students of a discipline in its purest form is but one conception of college teaching and it is a very limited one. It may be appropriate for some undergraduate teachers in some colleges but it is grossly inadequate to meet the educational demands in community colleges, liberal arts colleges, professional and vocational education, and adult and continuing education.

SUBSTANCE AND STRUCTURE

Graduate programs have generally been organized around academic disciplines. This organization is reinforced by the disciplinary-oriented department which is the fundamental operating unit. It is especially relevant to the researcher dedicated to extension of the scope of a discipline. It is less relevant to professors with an applied bent or a public service orientation. The disciplinary organization serves the undergraduate much less well. The undergraduate requires a curriculum which will enable him to cope constructively with his role in society. Since most knowledge is organized within disciplines, the undergraduate should know something about them. The disciplines constitute an essential resource for planning undergraduate education, but they must not be permitted to strait-jacket it. Many excellent undergraduate curricula are not organized on the basis of disciplines. Rather, they are based on problems, themes, or a social problem and policy approach. Accordingly, programs for preparation of college teachers must not limit all candidates to the traditional departmental disciplinary pattern.

A discipline develops from procedural rules defining its scope and modes of inquiry. Disciplines differ in respect to these rules and each has also a body of facts, concepts, and principles and modes of acquiring and verifying knowledge. Each discipline has also a subject matter (objects of inquiry) to investigate. This subject matter may be a natural phenomenon, a process, a material, a social institution, or other aspects of man's interests and concerns. A discipline has usually originated from an attempt to explain a phenomenon or improve a process, but the conceptual and the syntactical structures may move the focus and activities of its practitioners far from the reality experienced with unaided senses.

The disciplines may also be differentiated by the competencies required of practitioners, the modes of inquiry used, or the kinds of knowledge sought. From the viewpoint of the disciplinary scholar, relationships with other dis-

ciplines may be of peripheral interest, but for the student who wants to use what he learns, these distinctions may provide helpful insights. The undergraduate needs to see the relations of knowledge and understand means of applying knowledge (regardless of the disciplinary source) to personal problems and human affairs so that he can use that knowledge and methodology to achieve meaning and order in his own life.

The disciplines fragment the reality both of people and of environment. Because of this, many liberal arts colleges have adopted a curriculum based on other approaches:

1. A broader divisional as contrasted with departmental basis for organizing courses and requirements;

2. Themes, such as ecology, around which various groups of courses and emphases can be developed (University of Wisconsin-Green Bay);

3. Student interests or concerns with a great deal of individual flexibility;

4. A partly vocational, partly natural affinity approach in which courses and collections of courses into programs are developed around study of a geographical area or nation, or a career prospect.

The greatest hazard in these approaches to undergraduate education is the lack of interested and qualified faculty members. If these broad theme, problem, or policy-oriented programs conducted on inter- or supra-disciplinary bases are to be encouraged, a degree for college teaching should permit considerable flexibility. There are alternatives to the narrow, highly specialized study and research programs encouraged by some departments and graduate professors. These alternatives range from a broader approach to the discipline throughout the doctoral program (including the research) to a program based on a problem, an era, an idea, or a theme which draws upon several disciplines but is adequately encompassed by no one of them. But these alternatives raise concerns with faculty members who, in many cases, have not yet resolved the issues involved in moving from a research degree in a single discipline to a teaching degree of interdisciplinary nature.

Concerns about Adequate Depth

A central concern in planning DA programs is the basis for and adequacy of the treatment of the discipline. Equal standards with the PhD and assurance of degree quality imply, for many faculty members at least, as many courses and hours as for the PhD. Actual program requirements and discussions of these with administrators and faculty members on the several campuses visited reveal many variations and some basic disagreements.

One view is that the DA should have more course work than the PhD so that he can effectively teach any subject in his discipline at the undergraduate level. This can be done by granting little or no credit for the internship and thesis. Many of those asserting this view argue that the time and effort required for the internship and the thesis is likely to be much less than for a research dissertation and they decry granting any significant credit for teaching or nonresearch writing. Alternatively, if credits are granted, these may be regarded as justifying an increased credit requirement much in the pattern of adding physical education and religion credits to the basic 120 semester hours for a BA.

The issues of depth and breadth in courses are also related to the necessity, as perceived by some faculty members, of at least a limited experience in research aimed at acquiring new knowledge. This experience is viewed as facilitated if the individual's program includes a special emphasis analogous to the PhD. Some goal statements for the DA include the prospect of research in the discipline as well as teaching. There is also a widespread conviction that a scholarly treatment which involves a broad overview of a discipline is likely to be more exacting and time-consuming than a narrowly conceived research topic.

Another expressed view is that only by concentration in sufficient depth to permit study at the frontier of a growing phase of a discipline can one really achieve understanding of the nature of the disciplines and of research in it and then only if he examines and explains some specific aspect of research or makes a contribution of his own.

Those who are willing to forego specialization in the DA face some skepticism from colleagues who view this product as a generalist obviously not on a par with the carefully honed specialist. Moreover, embedded in this controversy is the belief of the specialist that the introductory or basic courses in the various aspects of the discipline require neither the ability nor the effort that is necessary for advanced seminars and research on narrow topics.

The concern, especially manifested in the sciences because of the fundamental role of experimentation, that every doctoral degree recipient engage in basic research and produce new knowledge reinforces the expectation, if not requirement, that there be some specialization for the prospective teacher. Research projects tend to be clearer and less complicated when they are reasonably obvious extensions of recent research.

Another concern evident in the single disciplinary approach to a teaching degree is with the definition of the discipline. A common view represented in the graduate curriculum by lengthy lists of courses and seminars almost forces specialization because the discipline appears to be simply an

aggregation of discrete bodies of knowledge. The courses in an English department, for example, are classifiable under periods, authors, genre, and linguistics. An alternative conception of a discipline views it as a way of accumulating and organizing knowledge. The discipline has then a structure determined by its concepts, principles, methodology and technology. With this conception, less importance is attached to the necessity of covering every aspect of a discipline, since the individual is presumably acquiring the insights and abilities which will enable him to readily grasp the essence of publications, reports, and research in the discipline.

Viewing a discipline in reference to the problem of instruction poses some new issues. A discipline such as mathematics or economics, as found in an undergraduate program, may be regarded as one of the liberal arts. It may be regarded by some undergraduates and professors as preliminary to graduate study—specialization in the discipline. And for others, acquaintance with the discipline may be limited entirely to its use in another field, for example, mathematics for engineering.

The traditional treatment of a discipline in most departments tends to ignore applications to professional and technical vocations or practical problems and, at most, introduces them as illustrations. Focus on the applications of a discipline to problems or to its use in other disciplines is so distasteful to some professors that these applications are recognized only if they have required special concepts or techniques to be added to the discipline. The further extension of this applied orientation to beginning with problems and using a discipline only as its concepts or methodology provide tools to analyze or resolve the problem places the discipline in a secondary or auxiliary role. The discipline is no longer seen as an end in itself, but only as a means whereby individuals and society can achieve understanding and possibly resolution of important problems.

If the problem or theme approach is to be used for planning a doctoral program, the difficulties seen almost insurmountable. Departments have been the units providing instruction, directing research, and defining degree requirements. But the planning of interdisciplinary programs is hampered by this departmental disciplinary orientation. Departments usually seek professors to cover the many facets of the discipline rather than to relate it to other departments. Interdisciplinary appointments may jeopardize the career of faculty members, especially the untenured. Promotions requiring joint actions are threatened, for one unit may be strongly impressed while the other is not. Even if all phases of an individual's effort are meritorious, the part-time nature of the effort may result in deferral of promotion in favor of those full-time in the respective units. Promotions are usually viewed in reference to their benefits to the department as much or more than in regard to the recognition of individual merit.

The interdisciplinary effort may label the individual as a generalist—a mild to damning term of opprobrium in a specialist-oriented department.

In planning a doctoral program which covers more than one discipline (and hence more than one department) the existing structure of graduate education presents enormous hazards. Though institutions, centers, etc., exist for research and service transcending disciplinary lines, these units are seldom empowered to grant degrees. For the student who spreads himself over two or more departments, the experience can be disillusioning or shattering. He may concentrate on the lower level graduate courses in each discipline and thereby be lacking both in depth or in sufficient knowledge to seek interdisciplinary integration. If he takes advanced courses, his limited background, compared to those concentrating in the discipline, may cause difficulties in time commitment or in unfavorable evaluation.

An interdisciplinary program which avoids superficiality must possess both focus and depth. The individual, with some help from his committee, must accept responsibility for defining and pursuing the integration and unifying principles or themes which justify the program. If there are no graduate faculty members or no structure already bridging the disciplines, the student may find it wiser to stay with a single discipline and confine his explorations elsewhere to the freedom occasionally provided by a minor or cognate.

In many universities, however, new structures and even new departments exist to provide a home for the interdisciplinary oriented study. These include:

1. *A divisional, interdepartmental, or multidisciplinary subject matter organization which offers opportunities for study in the fundamental techniques and historical aspects of several fields of learning which have a close intellectual relationship and reinforce each other.* Choices and weighting of concentration areas permit the designing of coherent and unified programs to meet individual needs. Such arrangements are most often found—and perhaps most easily developed—in the social sciences, but similar programs are possible in the humanities and natural sciences.

2. *Area studies or period studies*, such as American Studies or Classical Studies, with a focal subject matter: a theme, a problem, an era, or a human condition which gives unity and depth.

3. *Interdisciplinary programs* in the natural sciences provide opportunities to distribute work among several disciplines, but the number of combinations which have relevance for the college teacher is somewhat more limited than is true in other less cumulative fields.

Combinations in the broad field of biology focusing on man as a biological organism are directly relevant for those colleges in which the biological sciences are offered in a composite sequence. Genetics and ecology, which effectively cut across disciplines, are perhaps overspecialized for the undergraduate college, but provide knowledge relevant to current interests and concerns of students. Biology can provide a good background for college teaching, but its scope also permits an irrelevant specialization. The physical sciences have been notably difficult to combine at the undergraduate level, although biochemistry, geophysics, biophysics, chemical physics, and astrophysics suggest that combinations are appropriate in understanding certain problems.

4. *Various combinations of science, history of science and technology, philosophy of science, and economics which permit increased insight into the impact of science and technology on modern society.*

5. *Urban studies, area studies, ethnic studies, behavioral sciences, police sciences, social psychology, political economy, and economic geography.*

6. A problem approach which permits increased flexibility in meeting individual student needs and provides opportunities for disciplinary and cross-disciplinary study.

These approaches, in addition to expediting disciplinary and cross-disciplinary expertise, should also reflect the characteristics of undergraduate programs in which prospective college teachers may teach. These include more flexible ways of organizing learning experiences in seminars, tutorials, field work, and independent study, and more options in curricular patterns based on individual interests and needs. The patterns include emphasis on one discipline, several disciplines, and on inter- or supra-disciplinary approaches applying the disciplines within the context of themes, problems, modes of inquiry, ecology, and urban studies. A problem approach based on a divisional or interdepartmental organization provides an appropriate background for undergraduate college teaching of broad integrated studies in general education. It is perhaps most appropriate for the faculty member who looks toward a career in a small liberal arts college or a program which is highly individualized, problem based, and nondepartmental and nondisciplinary in structure.

The knowledge and subject matter emphasis developed in such interdisciplinary programs should prepare prospective college teachers to teach undergraduate interdisciplinary courses and seminars. Such broad programs may naturally include field work and surely will require independent study and experiences which also prepare teachers for under-

graduate programs which include such learning experiences. The existence of interdisciplinary problem-oriented courses in undergraduate programs and the extensive use of field work and independent study provide both a justification and unifying principle for the development of doctoral programs. Accordingly, in planning doctoral programs for teachers, more effort should be directed toward analysis of program objectives with a clearer focus on the competencies to be attained. Courses, seminars, independent study, scholarship and research, and internships should be integrated and arranged with theory and principles alternating with practice in their application, rather than as isolated independent theoretical experiences. Thus the subject matter and the educational experiences of the doctoral program provide a model of what the college teacher is expected to accomplish with undergraduates.

Means of Structuring Programs

The total experience with DA programs and variant PhD programs does not yet offer a sound basis for generalizing about program structures. In some programs, requirements have been stated in precise detail, including not only the total credits required, but also the precise courses and credits required in each category. Others suggest ranges depending on background, performance on examinations, committee recommendations, etc. The DA presents special problems not found with the PhD. The latter has a sense of unity by gradually narrowing the field of study and bringing it into fine focus by a dissertation which provides the basis for the final examination which confirms the research capability of the candidate. In contrast, the DA may cover the primary discipline broadly and even ignore aspects of it to accommodate minors, cognates, or isolated but relevant courses in other departments. The DA also typically includes courses (whether in education, psychology, or the major department) which cover diverse topics in learning, motivation, teaching methodology, curriculum, evaluation, and various topics on American higher education. To these courses are usually added an internship and a thesis. In addition to these diverse components, many DA candidates pursue their degrees on a part-time basis so that the various courses and experiences may be separated in time as well as in focus. A program of this sort lacks unity and sequence. It does not provide a dynamic experience modeling the ideal and hence may not alter the past teaching practices. Later chapters will discuss research skills, thesis requirements, and internship. In the discussion of each of these, one concern will be with defining the component in such manner as to interrelate it with others. Because of this concern, it is essential to lay out here some principles for program planning.

Some DA programs are so defined as to include all work following the baccalaureate and may include some requirements as to the credits and courses in the undergraduate program. The master's may be awarded

enroute to the doctorate if desired. Others assume a master's degree in the discipline and build the doctoral requirements upon it. In practice, most individual programs are and should be constructed in relation to all past study and to future plans. This is especially appropriate for the DA wherein education courses, work in related disciplines, teaching experience and prior research in the discipline or on instructional and curricular problems are relevant to the intended career.

In structuring requirements, a number of concepts are used. A core requirement usually provides a common background for all candidates and all may be examined over this core. PhD candidates typically major or concentrate in an aspect of the discipline and this with the dissertation defines the degree emphasis. Minor or cognate defines a group of courses from another discipline. An attempt was made to tabulate the DA requirements for all institutions and programs. The lack of specificity in credit and course requirements made it impossible to do this in some cases. Moreover, catalog or brochure statements are not necessarily descriptive of what candidates are actually required to do. By personal preference or committee specification, some of the students who had already completed the DA had taken credits well beyond those stated as requirements within the discipline. At times this was a use of elective credits, but frequently it added credits to the total degree requirements or diverted credits from the cognate or minor.

At some institutions, the requirements were under review or were being interpreted as guidelines from which deviations might be made as deemed appropriate by guidance committees. Generally we applaud this flexibility, although recognizing that it is subject to abuse.

Because of these and other factors, the following distribution must be regarded as a summary of recommendations which are not always clear and which may be undergoing change. The results are based on 40 programs in 16 universities and cover only the credits beyond the master's degree. Although credit requirements ran as high as 72, most were within the range 60-66. A 60 total has been used for compiling the percentages across all institutions and programs rather than attempting to compute percentages separately for each institution.

A low credit hour requirement in the major was usually accompanied by a requirement in a cognate. As these figures indicate, some programs are heavily emphasizing disciplinary courses at the expense of other facets of the program. The upper limits on the percentages are obviously inflated by the fact that a number of programs required more than 60 credits and ran as high as 72.

TABLE 1

Distribution of Semester Credit Hours over Various DA Components

	Credit Hours	Percent[a]
Major	24-57	67-95
Cognate	0-18	0-30
Professional Courses	3-18	5-30
Internship-Externship	0-9	0-15
Thesis or Dissertation	0-14	0-23
Total	59-72	

Note.—Based on 40 programs and 16 institutions.

[a]Based on 60 credits.

Uniformity in requirement patterns is probably of little concern across departments or institutions especially if DA programs are to be adjusted to the varying needs of community colleges, traditional and nontraditional 4-year college curricula and individual interest and prior experiences. However, we are concerned with the vast differences found in the weighting of the professional courses, internship, and thesis. These will be discussed separately, but we would make a plea for regarding this combination of experiences related directly to the teaching role as composing about one-third of the doctoral program. This would roughly equate these experiences to the research dissertation for the PhD which, in those institutions assigning dissertation credit, usually runs about one-third of the total. If this pattern were followed, a 60 semester hour doctoral program might be roughly distributed as follows:

Major and Cognate	40 credits	67 percent
Professional	10	16
Internship		
Thesis or Dissertation	10	16
	60	

We would also urge that the internship-externship and the thesis be planned in relationship to the major, cognate, and professional courses. A person

planning a career in community college teaching should have his internship in such an institution, or at least in a freshman or sophomore course similar to those taught in such institutions. His internship could include a development, instruction and evaluation of a special unit which would be written up as his thesis. An individual interested in interdisciplinary courses would presumably plan his major and cognate on this basis, carry out an internship in such a course, and select professional courses and a thesis topic which would provide additional insights and a well-focused unifying experience.

At the moment, we do not find many graduate students having this type of unified experience. Graduate courses in the discipline are taught exactly as they would be for PhD candidates without any recognition that graduate courses and the research on which they are based ultimately affects the undergraduate program by requiring curriculum and course revision. The undergraduate instructor who is not continuously alert to what is happening on the frontiers of the discipline is soon both out of date and sterile. Professional courses, whether offered by the major department or elsewhere, are not intentionally related or selected in relation to internship experiences and the thesis. We doubt that a unified doctoral experience can be provided in an institution unless the following characteristics exist:

1. There is a strong undergraduate program constantly under review, evaluation, and modification taking into account new knowledge, relevance to other fields, principles of learning, and developments in educational technology;

2. There is a strong graduate program in which at least some of the professors involved are concerned with instruction and willing to share this concern with their students in the design, conduct, and evaluation of their courses;

3. There is provision for individuals interested in interdisciplinary courses to develop programs on other than a departmental basis and also to have experiences in the planning and teaching of such courses.

In brief, we concur with the vast majority who insist that the prospective teacher have a sound base in one or in several related disciplines, but we doubt that really effective teachers will be developed by any program that does not provide a model and unified experiences therein which exemplify what undergraduate teaching could and should be. Consistent with this, we urge that the planning of the substantive experiences in the discipline(s) emphasize the basic concepts, principles, structure, and the development of independent capability in maintaining awareness of significant developments which have implications for undergraduate education.

PROFESSIONAL KNOWLEDGE AND SKILLS

The professional knowledge and skills component of a degree for college teaching is the heart of the program. It raises difficult questions and provokes profound differences of opinion. What is good teaching? How do people learn? How do we prepare teachers? Who should be responsible for teacher preparation? What should be the balance of disciplinary knowledge, teaching skills and techniques, and affect in the teacher? What should be the balance among these in the objectives to be attained by the student? Most committees, national or local, that have deliberated on professional knowledge and skills agree that there should be one or more courses or seminars dealing with teaching, curriculum development, and sundry related topics. They also agree on an internship experience. They generally insist that these experiences be provided by the department in which the student majors. This last recommendation reflects a long standing prejudice against courses on methods and teaching offered in education departments. The suspicion is that the professors of education, lacking an adequate disciplinary base, are inclined to overgeneralize or to inflate incidental matters having little relevance to good teaching. Each discipline presents its own distinctive instructional problems which can be treated effectively only by one well versed in the discipline. This recommendation also indicates a recognition that a department should not launch a degree for college teaching unless it has on its faculty one or more persons interested and competent in the problems of teaching, curriculum development, and evaluation.

Committees working upon requirements for the Doctor of Arts program have difficulty in agreeing upon the courses or experiences on professional knowledge and skills. Several distinctive and necessary components emerge quickly, but the ultimate solution does not. Everyone strongly asserts that knowledge in depth of the discipline is essential. But almost immediately some concern is expressed that the prospective teacher may

require greater insight than the researcher into the organization and structure of the discipline, its basic concepts, principles, and methodology. The teacher must be able to adequately present this structure at the undergraduate level. The researcher narrows his interest to a sub-aspect of the discipline and is generally less concerned about the total structure. Some persons will note that the typical graduate courses have so fragmented knowledge that they differ in organization, in mode of presentation, and in objectives from undergraduate college courses, especially the lower division broad gauge introductory or survey courses. Thus in many departments, in which a strong PhD program has long existed, it may be necessary to construct new courses or seminars oriented to the needs of the undergraduate teacher.

Discussions of a teaching degree recognize that the desired objectives of undergraduate education may be quite different from those apparently operative. Excessive attention to specific items of information, knowledge of facts and principles, should be balanced by broad understanding, exercise of independent judgment, and application of the knowledge that is being learned. There is recognition, too, that affective outcomes and psychomotor abilities require attention. Objectives for the prospective teacher and for the students who will ultimately be taught are obviously closely related. Preparation for undergraduate teaching should be based upon objectives of undergraduate institutions. These vary but there is general acceptance of broad educational objectives which transcend particular disciplines and spell out the essentials of a liberal education.

Since objectives state the goals of learning, the discussion of teacher preparation turns to the nature of the learning process, and the motivations which encourage or interfere with learning. Differences in students and within and among institutions and even within a single classroom require both awareness and adaptation, and at some point a discussion will note that there are differences between individual learning and group learning, and that group processes may provide incentives to individuals. And since this involves teaching methodology, it becomes evident that every prospective teacher should be aware of alternative approaches, have some opportunity to practice a number of them and develop some insight into the relative advantages and disadvantages of the different approaches in relationship to students and objectives.

Professors accept the need to advise undergraduate or graduate students in selection of courses, use of electives, and vocational implications of specializing in the discipline. Professors who have themselves served in liberal arts colleges or universities with strong undergraduate programs may have experienced the heavy demand which advising can impose on faculty. If each faculty member is assigned a number of students, he will find that some have not declared a major and many will not major in the dis-

cipline of the faculty member. For advising, the faculty member needs some sense of liberal education, some recognition that his own discipline may not be the most important thing for the student, and some recognition that in dealing with these matters it is at times impossible to avoid discussions of related personal problems.

Educational television, computer assisted instruction, programmed materials, and external degrees have been so publicized that every faculty member recognizes that the traditional classroom with its reliance upon lecture and recitations and the textbook is not the only route to education, and that it may be less effective and economical than other modes of learning. Many professors whose primary interests are in the disciplines rather than in teaching are distrustful of these newer developments, and find them personally distasteful. They are unwilling to explore and exploit their possibilities. Yet we cannot afford to turn out another generation of college teachers who are ignorant of these prospects. Some way should be found to acquaint the prospective teacher with these possibilities in their most attractive and effective forms. The attitude of too many professors toward educational technology has been largely based upon one or two unfortunate experiences in which the gadgetry failed at the climactic moment.

In some sense, every teaching act and every course represents an evaluation by the individual concerned as to the most effective and most satisfying personal way of teaching. An awareness of this arouses some sympathy with persons who are antagonized by a demand for evaluation. Nevertheless, there is a general recognition among those who have looked at the college teaching task that teachers should be aware of various ways to evaluate the performance of students and relate it to the learning experiences provided. Yet the extent to which a teacher can be expected to plunge deeply into the technicalities of test construction, measurement, reliability, and validity must be tempered by the recognition that these more technical aspects of evaluation are not really necessary, especially when specialists are available for counsel.

Most departments that have contemplated a Doctor of Arts program have felt it necessary to obtain from liberal arts community college deans or presidents an indication of their attitude toward such a degree and their expectations regarding teaching qualifications. Some replies have expressed concern that too many doctoral recipients from the university have had too little grasp of the problems and the role of higher education in the United States in the present day. Community college administrators are convinced that this institution is not yet well understood. Moreover, they find that prospective faculty members emerging from the universities are not sympathetic with their problems and broad service role in the community. These criticisms suggest that every prospective college teacher have a

course in history and philosophy of American higher education, a course in educational sociology, an awareness of legal problems, trends in unionization, problems of administration and management, economics and finance of higher education, the nature and role of the faculty in educational planning and resource utilization, and the characteristics and problems of the American college student. Such a comprehensive set of program requirements might yield a degree in higher education but hardly leaves adequate time for mastery of a discipline. Neither a serious reduction in courses in the discipline, nor an enlargement of degree requirements is palatable. There are other possibilities, all of which are in evidence in programs that presently exist.

1. Concentrate on those aspects of professional knowledge and skills which are intimately related to effective presentation of the discipline and ignore all others on the ground that these can be acquired incidentally during the internship or later. Higher education courses and educational technology can be ignored. Assume that faculty members will advise students only in relationship to the discipline and that this capability will emerge from mastery of the discipline.

2. Require some basic courses dealing directly with knowledge and skills in the discipline, designate a few hours as electives, provide a long list of courses from which students may choose these electives. Throw the responsibility on the students and ignore the tendency of faculty advisers to urge more courses in the discipline.

3. Maintain within the department those courses which are intimately related to the discipline but develop a limited list or a core of requirements in other departments which appear to cover other major aspects of professional competency. Patterns of alternatives may be arranged.

4. Devise a required core program or assign a block of hours which must be taken in higher education.

5. Develop formal relations through the auspices of the graduate school such that all candidates are required to attend one or two (credit or noncredit) colloquiums or seminars. This provides an opportunity for students in various disciplines to meet and discuss some of the broad aspects of higher education, perhaps stimulated by the appearance of a succession of professors and administrators. These seminars develop an awareness of the problems and some recognition that there are broader issues and contrasting points of view than those prevalent in particular disciplines.

This last point emphasizes the limitations of the departmental orientation. In curriculum development, departmental offerings focus on the discipline

and possibly one or two closely related disciplines. In a few cases, interdisciplinary courses embracing several disciplines within the same broad field have been suggested. But the departmental approach to curriculum is unlikely to take the broader look at what liberal education objectives are, what a balanced undergraduate liberal education should be, and how liberal education is to be related in the present day to the social and vocational role of the graduate. Some departmental committees have tried to avoid this limitation by insisting upon an externship. The expectation is that the student will be in a more realistic environment typical of that in which he will carry on most of his career and, at the same time, he can have a wide range of experiences in that environment, which covers all of the many facets of the professional knowledge and skills that go beyond the immediate demands of the discipline. Since externships are limited to three to nine months, this expectation is quite unrealistic. The extern has to teach courses developed by the local faculty or he may teach a new course or segment of a new course which he has developed. If the latter, he is probably conducting some evaluation of the impact of the course. In either case, he concentrates on teaching. The extern does not know enough about the institution to counsel or advise students. He is not there long enough to become involved in the curricular development problems of the institution. Unless he has already developed some aspects of educational technology for use in his course, he is unlikely to do so within a limited period of time. He certainly will not get involved significantly in faculty participation in governance. It is simply not realistic to attempt to burden the externship with the major responsibility for fostering the needed professional skills. The pattern developed at Carnegie-Mellon in history includes an internship in instruction, one in curriculum, and one in research or evaluation. These successive internships focus on particular aspects of the necessary knowledge and skills, but it seems unlikely that this pattern could be extended to include internships in administration and counseling.

The issue of credits for these activities and the proportion of time involved concerns students as well as faculty. The faculty tendency is to encourage courses in the discipline. Unless a block of time or credits is assigned for courses oriented to teaching, many students will end up with minimal experience related to their professional role. In some cases, this nondisciplinary professional experience has been assigned to noncredit symposia, lecture series, or seminars. Full-time students are so busy with their disciplinary-based course work that they avoid these noncredit experiences if possible and do nothing but attend otherwise. Students seeking the DA degree include many part-time students who find it impossible to attend such sessions because of conflicts. Even when credits are assigned, the basis is unclear. We found blocks of credit ranging from six to twenty assigned to this segment of the Doctor of Arts program. Written statements do not necessarily correspond with reality and the statements themselves are not always easily interpreted, but certainly the

variation in credits allocated to professional courses and to the internship is excessive. There is also a wide difference in policy in accepting instructionally related courses as part of the major requirements in the department. We have equal concerns about the lack of continuity of sequence, and of ultimate unity in programs which assign blocks of credit to the professional component and require or encourage the student to select isolated courses in other departments of the university. The student who has carefully assessed his own background of experience and selected particular courses because they round out certain deficiencies may find this an effective way of developing his professional outlook. On the other hand, some students are insufficiently clear about what is available in various courses, how they are taught, how relevant they are to their particular concerns, to make wise choices. Time commitments may force their choice. A course dealing with some relevant issue such as tests and measurements or philosophy of higher education may cover such a wide range of topics that most of it has little applicability to their immediate concerns.

Examples

The most common resolution of the problem of professional courses uses courses within the department to cover instructional methods and curriculum problems in the discipline and suggests certain courses in related disciplines such as psychology or education which deal with broader issues of learning and teaching. At Carnegie-Mellon a course in cognitive processes in the psychology department was prescribed because of the general commitment that students ought to be exposed to study of human learning. Although the course may be an excellent one for some purposes, many students and faculty soon decided that it is essentially irrelevant to the training of college teachers in particular disciplines. This we find is the risk of specifying courses not immediately related to the student's experience. In another case the requirement of a course in tests and measurements caused students to become extensively involved in technical aspects of test development, in item writing for lower levels of education, and in an overall time commitment which seemed completely unreasonable in terms of the values.

Catholic University has made an attempt to develop a meaningful relationship in the professional courses by a departmental course drawing upon and applying three of these courses in the discipline. Illinois State University, in programs still under development, has tentatively planned an educational component made up of competency modules. Each competency module is to include a statement of objectives, a plan for meeting the objectives, and method of testing proficiency. The topics covered include systems analysis of learning, research analysis of instructional techniques, student characteristics and roles, policies and governance of higher education, role implication of the college teacher,

measurement and evaluation, classroom interactions, strategies, test construction, teaching applications, seminar in research and development, community-junior college, and special problems in teaching and supervision. Each of these would be a limited experience carefully gauged to have relationship to the student's teaching role. The topics, with differing approaches and weights, would be offered in such a way that an individual having had previous experience with some part of the sequence could receive credit for that and confine his attention to other parts not already covered. Furthermore, the approach is in itself a significant model of one which the teacher might use later with his own students.

A number of institutions have developed plans for disciplinary courses which take into account the fact that undergraduate courses may be of an entirely different character than the typical specialized graduate course. The Illinois State University outline in history suggests the presentation of graduate surveys of either American history or Western history which would provide opportunity to take in the entire sweep of history in the major field. This would be viewed as an experience especially relevant for persons going out to teach freshman or sophomore survey courses. At Carnegie-Mellon, a number of courses in history have been developed around broad themes, conceptions, or methodology. These include such titles as, "Interpreting the History of Modern Thought," "Modern Emancipation Movements," "History Image and Idea," "Science and the Modern World," "The Structure of History," and "Perspectives in Urban History." The University of Illinois at Chicago Circle has given considerable attention to the possibility of developing a number of DA programs. One phase of its planning has been the development of detailed outlines for a series of courses. One of these entitled "Psychology and Sociology of College Instruction" would deal with the social factors influencing learning, learning concepts and principles which can be applied to higher education, characteristics of the college system, and role of the disciplines. A second course is entitled "Instructional Design for Graduate Students," which would develop principles and practices of course development for graduate students who intend to teach or create course materials. The topics include match between subject and student characteristics, use of different instructional approaches, use of media, educational technology, and the role of tests. A third course is entitled, "Instructional Methodology for Graduate Students," covering training and laboratory work in computer assisted instruction and audiovisual instructional materials, consideration of costs involved and the problems of integrating instructional technology into the system in appropriate ways, and specific assignments relevant to the student's major disciplinary area. A fourth course is entitled, "Research Methods in Natural Social Settings," covering techniques of recording, documenting, reporting and analyzing evidence from natural events related to education, statistical concepts and techniques, analysis of effectiveness of instructional systems, materials, techniques, evaluation of students and

teachers, relation of conclusions to planning and use of technology. These courses were planned within a context of broad concern for preparing graduates who would be specialists in the communication of knowledge. While many prospective teachers might not wish to engage themselves in the depth of experience involved in these courses, the approach at least indicates that by carefully designing new courses especially gauged for people who are taking responsibility for college teaching, a large amount of highly relevant material could be encompassed within a rather small space of time.

Lehigh University, apparently with an eye to the possibility that many of its DA recipients would be engaged in teaching in large urban areas and hence would require insight into the special problems of the urban area, developed a "sensitivity core." The degree in business and economics specifies a total of nine credits in three courses: Cognition, The Two-Year College, The Negro in America. Each of these is three credits, the first offered in psychology, the second in education, and the third in history. The cognition course includes topics such as contemporary theories of perception and memory, psycholinguistics, computer simulation of cognitive processes, information processing models and concept learning and formation. Government specifies for its sensitivity core a course in training and interpersonal awareness, six credits; teaching government, three credits, and a workshop in teaching government for another three credits. Other courses available which may be included on an elective basis in the sensitivity core are structure and syntax of the academic disciplines (education), American urban history, urban politics, civil rights, law and urban society. So far as we know, this represents a unique attempt to list a grouping of courses that have particular relevance for teachers in large urban areas. The Doctor of Arts degree is offered at Lehigh in business and economics, government, and psychology, and the courses—with the addition of some from education in the sensitivity core—are from these same departments.

The University of Northern Colorado, in an attempt to bring together the DA candidates from a number of departments, recently organized on an experimental basis a seminar in college teaching to be offered for the first time in the summer of 1973. This approach uses guest speakers on such topics as philosophy and background of the DA degree, current issues in higher education, theories of learning, and instructional problems. It provides an opportunity for the students to get quickly acquainted with some of the issues, to acquire some notes and bibliography dealing with them, and to join in discussions with prospective teachers from different disciplines of similarities and differences in points of view.

Middle Tennessee State University, in initiating its DA programs, specified 15 credits for all students from the area of higher education. The courses included Administering the Junior College Program, Psychology of Learning in Higher Education, Curriculum and Methodology in Higher Education, Problems of Evaluation in Higher Education, Structure and Organization in Higher Education, Overview of Higher Education. From these six the student was required to choose five, with the Problems of Evaluation in Higher Education being required for all. Students complained about both the amount of work required in some of these courses and their lack of relevance to their interests. At the time of an accreditation visit, some questions were raised by members of the accrediting team about the size of this block and, as a result, the combination of faculty reactions, student reactions and visiting examiner reactions resulted in the credit requirement being reduced from 15 to 12.

Although DA candidates in several universities were highly commendatory of higher education courses, we have concluded that higher education courses are somewhat less attractive sources for the teaching-oriented student than might be anticipated. The students taking these courses tend to be individuals majoring in higher education and looking to a career as administrators or researchers. The focus of the prospective teacher in a discipline is somewhat different, and the selection of topics and the range of discussion are not always appropriate. If there were a larger number of students enrolled in DA programs so that a sizeable segment of any course in higher education were made up of these students, the reaction might be different. Another problem, however, is that the faculty members teaching such courses have, in many cases, had very limited teaching experience in any of the disciplines and lack insight into the curricular and instructional problems of disciplinary-based departments. Another factor is the sheer number of courses existing in higher education, with the result that the selection of courses from the list is difficult for the student having only three or four credits to use. The nature of what he may get from his selection may be vastly overspecialized. To check on this point, a review of catalog listings in higher education for several institutions visited was made and after this was done with three or four institutions, a list of 42 apparently nonduplicating courses was found. A quick listing of the key word in the course titles suggests the range: student, curriculum, history, philosophy, instruction issues, junior college, financing, law, problems, research, clinical experience, administration, planning, personnel services, counseling, media, television, evaluation, statistics, social foundation, political systems, economics, psychology, sociology, budgeting, management, coordination, federal government, adult education, disadvantaged, independent study. We are not surprised that students find these offerings not well adjusted to their needs, especially when, as is usually the case, the majority of students enrolled have an orientation quite different than that of prospective college teachers.

Research Skills or Tools

The capability for research which has been the hallmark of the PhD has, over time, taken several different forms. Those research skills and techniques which are an essential part of the discipline itself are learned in courses, seminars, through various requirements of papers or laboratory tasks and finally culminate in a dissertation which demonstrates the research capability of the candidate. The requirement of reading knowledge in two foreign languages was long an acknowledgement that anyone who would keep abreast of research in his field must be able to read what scholars were doing elsewhere. In earlier centuries the mark of the scholar was the ability to use Latin; but as this language fell into disuse as the international form of scholarly communication, French and German were usually regarded as the two required languages. As other countries exercised leadership in the scientific world and as students became interested in and studied the history and literature of other nations, the language requirement gradually was liberalized to the point where substitutions approved by the department or the student's committee were permitted.

As scholarship in this country advanced and as translations became more readily available, the arduous task of learning a language solely for reading scholarly papers came to be regarded by many persons as essentially a useless hurdle. The next move in many institutions was to introduce alternatives to the language, often in the form of a collateral field of study outside the major or supporting minor but certainly not including any of the prescribed work for the degree. Such a collateral requirement was usually 12 or 15 quarter hours and could include a group of courses which the candidate and his committee felt might be particularly useful in his area of interest. This might also include courses providing certain research skills: mathematics, statistics, computer programming or courses in research methodologies in other disciplines. For example, the student in education might take some work in historical research, sociometry, econometrics, or other fields. At the present time many institutions have either entirely dropped foreign language requirements or have left the decision to the department. Some of the departments, particularly in the social sciences and sciences, have discarded the requirement, whereas in fields such as English, history, and music, committees or the department may regularly still specify one or two foreign languages.

The advent of the Doctor of Arts degree, then, is on a scene in which traditional research tools have been modified or discarded. But the new degree raises some questions beyond those raised with the Doctor of Philosophy. The teacher may be expected, from time to time, to engage in curricular studies involving the design and tryout of new courses. He may be interested in exploring the significance of various kinds of learning

experiences. Thus even the teacher of English might find that some experience in tests and measurements, some knowledge of statistics, and some capability in curricular development is relevant if not essential to his performance. In short, there exists a whole new set of research skills immediately related to the career of teaching. The impact of this broadened conception is somewhat dependent upon the discipline chosen by a student. Many of the research methods and statistical procedures useful in educational research are closely related to or, indeed, a part of the larger arsenal used by social scientists. Individuals in the sciences have frequently made use of statistical methods and of computer methodology in their research. The arts and humanities have paid somewhat less attention to educational research methodology.

This broader conception of relevant research techniques poses some difficult problems in planning a Doctor of Arts program. The student in a discipline, even for teaching undergraduates, needs to have some understanding of the research methodology characteristics of the discipline. To a considerable extent he can acquire this through research seminars, and most departments have accepted this possibility. However, a few of the science departments have held out for a depth experience in research in the discipline to the extent of a half dissertation or a master's thesis. Some departments have asserted that the student who wishes may elect the traditional research dissertation, adding to the knowledge in the discipline. If, however, (as the weight of statements in the DA programs indicates) the intent is that, for most students, the thesis be related to their teaching career and possibly tied in with their internship, then a whole series of capabilities becomes relevant. In addition to statistical methodology, test development, evaluation, curriculum analysis and development and the broad area of educational technology become important. Programmed learning, computer-based learning, the use of television and films, and the preparation of visual materials are all very useful to the teacher who would broaden the learning experience of his students and attempt to relate their experience more vitally to the particular goals to be achieved.

How is this to be resolved within the framework of a Doctor of Arts degree which still must provide a respectable background in the discipline and possibly in one or two closely related disciplines? In particular, how is experience with educational technology or computer-based learning to be provided on a campus in which the resources are few and such applications nonexistent? In some programs the answer clearly is that nothing has been done about research skills beyond those required in the discipline and the permission to substitute a wider range of possibilities for a foreign language if this is still required. In other cases, courses offered within the department dealing with curriculum development and instructional methodology include the essential elements of test construction, curriculum development, and other aspects of educational re-

search. Most departments developing a DA have taken, at the very minimum, the responsibility for providing within the department one or more courses in teaching methodology and curriculum development in the discipline. To the extent that there are persons who are competent and who have had extensive experience in these areas, this is undoubtedly the best way to provide the experience. Other departments have taken the point of view that courses in science education are appropriate for their students. Still others have listed courses in education, psychology and elsewhere which deal with broader problems of higher education and include as specific cases matters of teaching, objectives, evaluation, and educational research. Our conviction is that courses which take the student into aspects of research methodology not directly germane to his teaching field need to be followed up or associated with some significant experience related to instruction, else the benefits are likely to be lost. We suspect that students generally might learn more about educational research methodology if they were, early in their graduate careers, involved in some such activities in their departments and gradually assimilated some of the essential ideas of statistics, tests and measurements as they found them useful in their work. Experiences over a period of years with faculty members on active duty indicate that many of them do amass a considerable amount of expertise in aspects of educational research without intensive study, at any particular point, of techniques which, by themselves, are demanding in time and energy, frequently uninteresting, and too often quickly forgotten.

In any case, the range of research skills that may be relevant for a given individual needs to be carefully studied by that individual and his committee in reference to his past experience and his interest in the field. Generally, we think that the occasion should be taken to expand as far as possible his acquaintance with the range of research techniques available for instructional research. For teachers on the job are much less likely to extend themselves to master skills or resources that are usually not so readily available as they are on the university campus. A number of departments have provided a course which includes a rather thorough and current review of educational research literature on instructional and curricular methodology, especially some of the more current attempts at curricular change. Such a course as this can do much to develop familiarity with literature and make the student aware of certain research methodology and even, with a little extra effort, encourage the development of at least sufficient insight to read intelligently articles involving measurement and statistics. They may be more effective for most teachers than isolated courses taken elsewhere.

Among the programs reviewed, we found a few still asserting the foreign language requirement. Five, and these were primarily English, history, and music, demanded at least one foreign language and possibly two at the level of a reading knowledge or one with a high level of proficiency. In perhaps a

third of the programs no statement was made at all about the requirement in this area of research skills, and in the others, alternatives were provided, with foreign language being but one of these. A few programs held to the foreign language requirement simply to maintain standards equal to those of the PhD. The majority have accepted the desirability of other research skills more directly related to teaching and provide some opportunity to acquire them.

The Thesis or Dissertation

The thesis or dissertation shares with the internship an uncertainty as to the nature, extent, timing, and evaluation of the requirement. The faculty members in teaching-oriented doctorates, with only three or four exceptions in all the programs reviewed, have the PhD and experienced the research type of dissertation. Some insist that even a teaching doctorate must provide this experience, and would encourage or enforce this by requiring two half-dissertations, by insisting that at some point in graduate study a research study or minor thesis be completed (master's thesis or enlarged seminar paper), or by permitting (and encouraging) a dissertation of the PhD research type, though probably of lesser extent.

The uncertainties regarding this requirement are reflected in the language as well as in the suggestions offered to students. The English department at Idaho State University specifies "no dissertation" but asserts that the DA candidates must write substantial critical scholarly essays, or a creative work in two seminars. The chemistry department at the University of Illinois (Chicago Circle) specifies two half-dissertations, each allotted 24 credits. One must be original research in chemistry and the other in teaching or curricular innovation. At the University of North Dakota, the dissertation is "not required as such" but some independent research must be completed. Apparently, most DA candidates at North Dakota actually do two pieces of independent research. We found one department in another university with no dissertation or research requirement, but discussions suggested that this was because of inability thus far to agree on the nature of the task. And, of course, there is the DA in English at the University of Oregon, which really signifies an ABD.

The variations in conception, then, run from no dissertation through papers and essays of various lengths to two half-dissertations and a full-length dissertation. The latter in many cases could be the typical research effort. We have attempted to capture from the degree specifications phrases which intimate the nature of the expectations.

These include essays or accumulated seminar papers, typical research but less complicated and briefer, creative work, curricular or instructionally related research, development of instructional materials, review or integra-

tive essay, and the use of educational technology. In some programs (perhaps eight or ten) the thesis has been de-emphasized to the point of being delimited in length, time, and location in the program. In two cases an essay of 20 to 25 pages is suggested; others suggest 50-100, 75-100, 100-200, and one specified a maximum of 125 pages. One department stated a limitation on words—20,000, to 40,000. These limitations result from a number of assumptions: (1) the internship is the culminating experience and final basis for awarding the degree; (2) course credits and seminar requirements have been increased beyond those for the PhD; (3) the resulting paper should be of quality and in form for publication in a journal.

One program stated, and discussions elsewhere suggested, that some professors would prefer that the thesis be completed before the student starts the internship or externship. Where externships were contemplated, there was some doubt that students would do much on a thesis during the externship and they might not return to the campus to complete it. Nevertheless, the weight of the discussions of the purpose of the thesis and its nature indicates a definite preference for relating the thesis in some manner to the internship.

Purposes

Although relatively few students have reached or completed their dissertations, both faculty and students have reasonably felt the necessity of indicating acceptable alternatives. Many of the descriptive phrases reoccur in several programs, suggesting that the newer programs have benefited from perusal of the earlier efforts of others. The following phrases, culled from review of the program statements, are typical:

evidence of ability to apply materials and methods of scholarship to enrichment of undergraduate teaching,

related to improving teaching,

demonstration of ability to communicate knowledge of a discipline,

combination of scholarly, analytical, creative and expository skills,

enrichment of human knowledge or experience,

evidence of creative ability in techniques of mathematical exposition,

relate historical research and teaching,

reflective essay on goals and evaluation of teaching experience to date,

minor thesis or short piece of original research,

rigorous and original academic experience,

significant contribution to mathematics or mathematics education,

awareness of need to keep abreast of new materials and means of doing so,

original contribution to the reservoir of materials which communicate some aspect of a discipline to a selected target audience,

contribute to knowledge of the instructional process in the naturalistic rather than the laboratory setting,

relevant to teaching undergraduates and involves assimilation and evaluation of material presently available,

independent investigation,

evidence of competency in field,

practical application of sort that individual will be engaged in after graduate study.

Suggested Topics

The preceding list of purposes leads directly to suggested topics. Again, we have selected the topics from program specifications or related materials. However, we have attempted to group these topics in relation to the prospective audience. The first group is made up of materials and procedures directly useful in instruction. The second includes essays or monographs particularly useful to the teacher in certain courses or in the discipline generally. The third, though having relevance to instruction, emphasizes critical scholarship or creativity. The final group suggests topics that might make the thesis a culminating experience in respect to some aspect of the program or to the total experience.

Focused on Undergraduate Students:

Development of study materials, evaluation, and revision.

Design, use, and evaluation of an instructional unit.

Preparation of a workbook for student use.

Preparation of extensive audiovisual materials.

Exploration and evaluation of new techniques for communicating a technique or concept.

Development of a multi-media approach to teaching.

Development of an important laboratory experience.

Work up detailed plans and materials for a new course.

Plan for evaluation and revision of a curriculum.

Preparation of a television script for use in instruction.

Development of instruments and procedures for evaluating student progress.

Analysis and remediation of student deficiencies.

Directed to Teachers:

Monograph containing suggestions and procedures for teachers of a course.

Synthesis of materials related to an instructional task.

Series of articles on problems related to curriculum or teaching.

Essay on current status of instruction and curriculum in a discipline.

Evaluative essay on tests and instructional materials.

Bibliographic essay.

Historical or critical treatment of an issue or problem with implications for teaching.

Writing a textbook or preparing an anthology.

Addressed to Scholars (but possibly with implications for teaching):

Scholarly exposition of some aspect of discipline.

Monograph presenting fresh ideas on a subject of interest.

Collection of original creative works (poetry, drama, narratives).

Research on primary materials.

Portfolio of research papers on different topics.

Collection and editing of critical scholarly essays or creative works originally prepared for seminars.

Integrative Experiences for Personal Development:

Exercise in research techniques or methodology.

A personal synthesis of disciplines and experiences based on courses, seminars, and internship.

A reflective essay on goals and evaluation of progress to date. May include seminar papers, reading lists, examinations, tapes, games, simulations and interaction analyses of classes.

In-depth study of an issue or overlap among science, technology, and society.

These suggested topics clearly reveal that the faculty involved in these programs recognize and probably favor a thesis which is directly related to the teaching role. Yet we found also that many faculty were unsure of how such studies should be carried out and, occasionally, somewhat dubious of their respectability in comparison with the traditional research dissertation. Whether the degree candidates will undertake such theses and interrelate them with their internships will depend upon finding sympathetic faculty members who will provide the guidance and encouragement needed. This will become easier as the faculty includes individuals who have themselves engaged in and published such studies.

Summary

The task of coupling together the several components of the DA degree can be reduced to the balancing of further depth experiences in the discipline with experiences related to the teaching of this discipline in college, recognizing that in teaching certain other responsibilities occur. On the whole, the attempt to define various segments of the teaching doctorate indeper.dently of each other and to encourage the student to sample in each area and somehow fuse these does not work out well. Particularly, it does not when in most of the institutions there is no extant model for the students to copy. They see disciplinary-oriented professors teaching graduate courses without much concern about principles of teaching or learning.

They see individuals in methods courses and in higher education courses covering materials which have limited relevance to other segments of the DA program. This problem of the lack of unity of the several segments of the program poses a terrific drain on the individual. And, the pressures of graduate work being what they are, the student tends to emphasize his disciplinary courses even when his interests run strongly to some of the others. Some tension could be alleviated by course reorganization within the department, which would ensure that more of the graduate courses in the discipline would have direct relevance to undergraduate teaching. A few courses in the department dealing with the problems of instruction, curriculum, and evaluation, are certainly needed. There should also be ongoing programs of review, evaluation, and improvement of undergraduate instruction which would provide a significant internship and an opportunity for learning in practice. Reports from students reinforce our own conviction that a course in teaching methodology, learning or curriculum construction taught in a disciplinary-based department is no assurance of quality or relevance.

We are also convinced there is a need for a few courses or experiences bringing together DA students from several fields to look at the broader obligations of the college teacher as a counselor, as a committee member, and as a participant in institutional curriculum development.

There are, however, a number of problems with this approach. The development of new courses costs money and the number of DA candidates in most institutions hardly justifies the additional offerings. Since there is a profound difference in points of view about the characteristics of a good teacher, there are likely to be many persons who will continue to view the preparation for teaching as little different from that for research, possibly differing only to the extent of permitting a dissertation which has more relevance. On the other hand, it would be tragic if, by imposing too much upon the time of students to ensure that they have a significant experience with courses and practical experiences in the professional aspect of the teaching role, we created such a gap between university professors and undergraduate teachers that it would parallel that presently existing between colleges and universities and the secondary schools. The requirements for the professional component could be expanded to the point where they would seem unreasonable to students and to large segments of the faculty. They would then be deprecated as are generally the educational requirements for preparation of teachers at lower levels. Much of what the college teacher needs to learn can be learned in practice, provided that he has been sufficiently stimulated to recognize that there are different ways of teaching, that there are problems in motivating students to learn, and that there is a continual need to update not only the content which he teaches, but also the means by which he presents it. And perhaps most significant of

all for the undergraduate teacher, and most difficult to attain in belief and practice, is the acceptance that for the undergraduate students the experiences with a particular discipline are but means to some broader end. Unless the undergraduate teacher has become aware of and accepts this, we may only end up with teachers who present more of the discipline in its purest form. While having improved teaching in one sense, they may lose most of their students in so doing. This is the reason that we are concerned that some part of the teaching experience focus on those undergraduate students who have a limited experience in a discipline and primary concern for its utility in other fields.

THE INTERNSHIP

The internship has been extensively discussed with no clear agreement emerging among institutions involved in a teaching doctorate and not even very much agreement within departments on the same campus. The definitions of internship vary considerably. The State University of New York provides the following:

> The proposed internship for the Doctor of Arts is analogous to a medical internship. Following formal training in the discipline, it is a period for refining and testing under supervision the knowledge and skills of the beginning practitioner. Specifically, the DA internship is defined as one or two semesters during which the candidate undertakes the full responsibilities of a faculty member at a two- or four-year college which has reviewed his credentials and accept him as qualified for the position.

The Mathematics Department at Carnegie-Mellon states that as a final test of the student's training he will be required to develop, plan, and teach a course of his own design and present to the department a summary of this pedagogical exercise. It is anticipated that both the pedagogical exercise as well as the final writing of the thesis will occur in the fourth year of study. This fourth year has been designated for the DA candidate as an internship. Depending on the student and his program, the internship will be carried out either in the department or at a nearby school or college. A significant curricular development must be a part of the student's contribution; that is, he must plan and teach a course, and he must write up in useful form this development. At the same institution, the Chemistry Department states:

> All candidates must assist in the undergraduate teaching for four semesters. The candidate must participate in curriculum and course development in chemistry; he must plan, develop, and teach a two-semester course and two one-semester courses. The student should teach his course at CMU or a neighboring institution under close supervision of a Chemistry Department faculty member. During the internship the student will develop research skills which point to the application of new scholarly knowledge to the classroom and to the dissemination of knowledge.

The English Department at Carnegie-Mellon states that the internship will be flexible in nature and adapted to the dissertation plan of the individual. It will focus in some way on teaching in the area of the candidate's interest. The History Department at Carnegie-Mellon speaks of an internship in historical research, an internship in curriculum development in history, and an internship in the teaching of history. The art-music area indicates that each DA student will have an internship responsibility during the first semester of the final year of course work. He may function as an assistant or part-time instructor, as a curriculum designer, or he may be engaged in a special research project.

The English Department at the University of Mississippi describes the internship as a two-fold operation. The student interns in a class taught by a member of the professional staff of the department. He also interns in an internship seminar. The student takes back to his classroom situation what he has learned in the seminar and he brings to the seminar what he has encountered in the classroom situation. It is this combined program of seminar and classroom laboratory that constitutes the internship program. But other departments forego elaborate statements for one such as: one year of participation in classroom and laboratory instruction at the freshman-sophomore level and one additional semester in an upper division class. In one case there is no formal requirement of an internship because the program is limited to experienced teachers.

Issues

The variation in conception of the internship becomes even more apparent as specific aspects of it are inspected. There is some disagreement about when the internship should occur. Generally it is in the final year, but institutions differ in specifying the first semester of the final year or allowing the internship to be the last formal experience of the program. One institution specifies that the internship should be after completion of 60 hours of course work and another suggests that the dissertation should possibly be completed before the internship is started. Apparently there is some concern that if individuals do not return to the campus after the internship, there may be problems in completing the thesis or dissertation.

There is also a great deal of variation in the length of time allotted to the internship. The following phrases indicate this rather dramatically:

One semester full time,

Two semesters full time,

Equivalent of one year,

One quarter teaching an introductory course and one additional period in an upper division course;

At least two quarters;

Minimum of one year, half time;

One semester internship on campus and one as an extern off campus.

One institution attempts to interpret the internship in terms of teaching load: 16 quarters as a student assistant at the lower division level and 12 hours of teaching later at a more advanced level.

In great part the issue of time is so intertwined with the precise definition of the internship on a given campus that comparisons are difficult. Although many institutions have decided that the ordinary teaching assistantship in the first year is not appropriate as an internship, others view this initial teaching role as a beginning stage of the internship. They may then add an experience in a more advanced course on the same campus and suggest as a culminating experience an externship elsewhere.

The matter of credits clearly indicates some of the misgivings that faculty have about the academic value of the internship. In a number of cases, no credits are granted and in others anywhere from three to 12 credits are granted. However, these may be added on to the basic requirements very much like physical education was an add-on at the undergraduate level. Careful reading suggests that in a number of programs 60 credits beyond the master's is the minimum for a doctorate, but one finds 62 to 68 required and can trace this back to the fact that an equivalent number of credits is allowed for the internship. However, such comparison of credits at the doctoral level is somewhat petty and it must be recognized that practices have varied greatly with the PhD as to whether credits are assigned to the dissertation. At the same time, we believe that this great variation in credits (or no credit) for the internship is an index of the doubts which many faculty members have as to whether this experience is worthy of credit.

There is some confusion brought about by regarding the internship as the equivalent of the medical internship. The analogy is not quite appropriate. The MD internship requires activities which are essentially different from on-campus class experiences. The internship is for certification and not for the degree. However, for the Doctor of Arts degree in most cases the internship is required and the teaching experience simply moves the student to the front of the classroom where he assumes the role of teacher.

The issue of credits gets intertwined with two other considerations. If the student performs all or part of his internship on campus, many persons doubt that the student should receive both credit and pay. But, if the internship does not yield credit, then there may be problems in collecting fees from students for this educational experience. In state institutions appropriations are often based upon student credit hours produced. Yet the primary concern of some faculty members seems to be that it is completely inappropriate for a student to receive both credit and pay when the internship is on the campus. Apparently it is all right, however, for a person to engage in an internship elsewhere and be paid at the regular rate while satisfying the university requirement. We find the distinction somewhat baffling.

A second relationship which complicates the matter of credit recognition of the internship is the fact that on many campuses the students engage in the internship along with a colloquium or seminar. The student enrolls in the colloquium or seminar for credits and simultaneously engages in the internship. One may take the point of view, enunciated in one of the earlier statements of purpose, that the combination provides the internship or that there is a course for credit and an internship which receives no credit. Apparently both points of view exist. There is also a possible relationship to the dissertation. In some cases the student is expected to do some prior planning for his internship, carry out a project, and write it up as his dissertation. In this situation, it would seem that the internship experience, the dissertation, and possibly some of the prior course work related to teaching and curricular planning are inextricably intertwined. And, indeed, there is no objection to this; it might well be the ideal to be attained.

On most campuses there has been considerable discussion about the importance of the internship. We have already noted that in one institution no formal requirement of an internship exists; another group of institutions suggests the possibility of waiver of the internship on the basis of experience. Infrequently, formal appraisal either by letters from individuals who have observed the person's teaching or by a demonstration—either before the person arrives on campus or afterward—is required. In one case, it appears that the evaluation might degenerate to the preparation and delivery of a lecture. In no case, so far as we were able to ascertain, is credit given for the internship on the basis of waiver of the requirement. Rather, other courses are substituted or, in a few cases, a different type of professional or administrative internship may be used, or it is simply waived.

Nature of the Internship-Externship

In those programs in which the most attention had been given to discussion and clarification of the internship, there was an attempt to develop

this at two or three levels. For example, the internship at East Texas State University is described as follows:

The course, Internship and Colloquium, is offered at three levels. Each level extends over two semesters and gives 3 hours of credit for each semester. Second level is required of all candidates for the doctorate.

Level 1. For interns without previous teaching experience and not serving as assistant instructor. Varied and rotating in-class and extra-class assignments to familiarize the intern with different aspects of the discipline in which he is majoring. Under supervision of departmental director of interns with the assistance of other experienced members of the department's graduate faculty. Participation in a colloquium at least once a week.

Level 2. Required of all candidates for the doctorate. Varied in-class teaching experiences, progressively sophisticated and including both lower and upper division courses. Must include the equivalent of at least one semester of full responsibility for a regular college course. Experience in curriculum planning, committee work, and departmental organization is required. Attendance in a colloquium with experienced graduate faculty one hour a week.

Level 3. Required of all interns reappointed as assistant instructors. Teaching, under supervision, regular college courses or assisting with departmental administration or a specialized departmental program or project.

At the University of the Pacific, the internship is described at three levels in the following terms:

An essential part of the program is a teaching internship, designed to provide the candidate with different kinds of professional experiences, to eliminate menial and pointless duties, and to see that his apprenticeship in teaching follows a rational progression. The following plan will be flexibly administered according to the experience and interests of the student:

1. At one point the candidate may staff a reading and writing laboratory for students who require "remedial" help.

2. At another stage, the teaching intern is assigned roles that involve considerable responsibility and more experience. He will be put in charge of regularly scheduled discussion sections of courses in an extensive program for UOP freshmen.

3. At a third stage, the intern assumes the responsibility for planning and offering courses. Some will assume full responsibility, perhaps in teams of two, for a course in the freshman year program. Others will be assigned to plan and teach a colloquium involving 10-15 undergraduates.

A proposed Doctor of Arts in Speech and Communication at The University of Michigan indicates at the first level that a teaching assistant will work with a regular faculty member observing, discussing problems of motivation,

critique, and grading. The second level would be as a teaching fellow with full responsibility for two or three sections of basic speech courses, and the third would be an extern in a cooperating institution teaching two courses in each of two terms supervised by representatives of both faculties.

Perhaps this attempt to develop a sequence of experiences can be generalized to some such steps as the following:

1. Some exposure to the various forms of teaching and learning: lectures, seminars, discussions, tutorials, course and curriculum instruction, evaluation of students, laboratory, etc.;

2. Gradual involvement in various forms of teaching and learning and progressive development leading to conducting a part of a course or assuming responsibility for an entire course;

3. A continuing and close association with one, two, or three professors who have established reputations for good teaching;

4. Desirable, though not always possible, a culminating experience in another institution.

One of the major reasons given for favoring an externship rather than an internship is that the degree candidate can scarcely have on the university campus the kind of experience with undergraduates that is possible at a baccalaureate level institution or community college. There are several reasons for this. One is the established pattern of student relationships with the faculties; another is that there are limitations in the responsibility that can be assigned to a graduate student on the campus. If the student remains on the campus, he probably is also involved in other courses and requirements which make it difficult to assume responsibilities beyond the actual teaching role. Some of these concerns are perhaps unrealistic. For example, there seems to be much concern about the qualifications of the degree candidates for accepting full responsibility for a junior-senior course at the university, but there is no equivalent equal concern for teaching a junior-senior course at a liberal arts college. It is probably true that the experience of serving on curriculum committees with faculty is not likely to be very realistic at a university. The question, however, must be raised as to whether an individual in a semester or year internship on a college campus can become significantly involved in advising, committee activities, and the like. And since in many cases the faculties of community colleges and liberal arts colleges have been the main source for DA candidates, one might assume that they have had an adequate amount of committee work and advising.

If one examines the range of experiences or tasks that are suggested as part of the internship—making tests, advising students, reading papers, delivering lectures, directing the efforts of independent study students, getting involved in some kind of research or evaluation study dealing with curriculum or instructional methods, teaching both introductory and advanced courses—it becomes obvious that no internship is going to encompass this even within a full year. One might suspect that a seminar in higher education devoted to the problems of liberal education, curriculum development, and the role of the faculty in educational planning would give most students a better overview of the broader problems of liberal arts colleges or community colleges than the very limited experience that a student could have during his internship.

Evaluation

The problem of evaluating the internship is one that some departments have apparently ignored. Several faculty members asserted quite pointedly that no one could define good teaching and no one could really evaluate it. The result of this is to justify easy waiver of the internship or, at most, to assume that the completion of the internship takes care of the requirement. Nevertheless, some programs stated that an inadequate performance as an intern would destroy the possibility of an individual completing the program. A number of different suggestions have been developed for evaluation. Several programs indicated that a committee of two made up of a professor on the home campus and a professor at the college of externship would regularly evaluate the person and turn in reports on him. One institution indicated that the committee would be made up of three persons, adding to the previously named two a professor from the college of education. The steps for evaluation include systematic observations by the supervisors, the preparation of formal reports of the visits to the classroom, and a reporting back to the individual of the observations of his mentors. In several places it was suggested that videotapes be made of the classroom performance of the student so that these can be played back for self-evaluation by the individual and perhaps with critique by his mentors. In one institution fellow interns evaluate each other and find peer criticism more honest and helpful. Student evaluation is suggested also as a useful way of collecting evidence.

Although in some cases it has been asserted that the internship should involve the use of materials constructed ahead of time by the student and the evaluation of these, the general tendency in evaluating the internship is to emphasize the performance of the individual in the classroom. Some evaluation plans include such items as stimulating the interests of students, scholarly adequacy of the presentations, describing the structures of disciplines, the use of library materials and available teaching aids, the

advising of students, and the bases for student evaluation. One list adds to this the effectiveness of candidate participation in other department and college activities—a criterion which we find somewhat questionable in the light of our concern about the overall responsibilities of the student during his internship period.

Summary

Our review of the internship proposals and our experiences in talking with the relatively few students who had completed their internships leads us to conclude that there are a number of points which have not been adequately programmed thus far in planning internships.

In too many cases the internship has been structured in reference to a course which is rigidly controlled by individuals with fixed ideas about how instruction should proceed.[3] We believe that the internship should enable the individual to develop his own potential as a teacher rather than to subscribe wholly to the views of his supervisors. Faculty directors of the internship experience are certainly necessary, but they should be persons who recognize fully that there is no one best way of teaching and that each individual has to work out for himself the most appropriate learning procedures relative to what he wants to accomplish with the kind of students with whom he works.

The internship should be adapted to the experience and needs of the individual; there should be an early experience which helps the intern and the faculty director to assess the strengths and weaknesses of the individual and the limitations of his prior teaching experience. The teaching experience should be planned as a continuing one rather than one limited in time to a particular segment of the graduate program. We should be concerned with the development of teaching ability rather than simply a demonstration of it.

The courses which are offered in the DA program should themselves be demonstrations of effective teaching, and each course offered should regularly provide time for the examination of its implications in undergraduate instruction as well as opportunity for each student to contribute in some way to the development and direction of the course. This may be nothing more than an informal opportunity for student questioning and evaluation, but it does mean that each course offered in the DA program should have clear statements of objectives which transcend particular content or materials used.

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[3]As in one institution where a very innovative student was forced to follow his mentor's pattern of straight lectures.

Teaching seminars and the dissertation should be related to the internship teaching in such manner as to encourage critical examination in depth of teaching and learning and thereby model the characteristics of a good teacher who continually appraises and reappraises his efforts in reference to the learning demonstrated by his students. If the internship or a major element of it is to be the climactic aspect of the program, then internships should be planned well ahead of time so the students can acquire in advance insights into the internship environment and the objectives and the content of the courses to be taught. The intern should be required to lay out a program for evaluating his own teaching including student reactions, evidence of student achievement, and reactions of his faculty mentors or supervisors. Criteria for this evaluation should be agreed upon in advance. Concrete evidence should be collected through tape or videotape recordings, classroom observations, tests, ratings, and other evidence which can be objectively reviewed and appraised. We emphasize this latter because if decisions are to be made that a person is not able to carry through an adequate job of teaching, then the evidence must be clearly available to demonstrate this.

Internships should be provided only in institutions within which there are continuing concern for and activity in evaluation and improving courses and instructional policies. If this be true in an institution, then there appears to be no particular reason why students should be required or urged to take on an externship activity. Some mature teachers seeking a DA may be in a position to initiate some significant innovations in their own institutions, but there is always a danger that an individual who attempts to fulfill an externship through continuation of the role already determined will maintain his stereotypes rather than exert his potential for further improvement.

If an institution is not continuously involved in evaluation and improvement of its own undergraduate program, it should not embark on college teacher preparation. If it is, then it should be in position to provide an internship which will be more significant and more demanding than an individual is likely to find on another college campus. Furthermore, this possibility opens the door to the individual being involved in some significant curriculum development, instruction, and evaluation over a period of time, rather than in some limited space of several weeks or months. In this way, the internship, the thesis, and the course work could be interrelated into a career pattern which more nearly emulates the role of the effective teacher in undergraduate institutions. On a campus in which there is continuing innovation in undergraduate education, there will be models of faculty members with whom the candidate can identify. We consider this essential if a program is to be truly effective. Long experience with the preparation of teachers for secondary schools and elementary schools surely provides some evidence that when substantive courses are separated from methods,

and when practice teaching is separated from other experiences, the successful integration of all of these aspects and their relationship to the actual task of facilitating the learning of children is difficult. With college students, particularly those at the advanced undergraduate level, the treatment of a discipline and the maturity of the minds of students, particularly if some of them are encouraged to extensive independent study, can be such that instruction and continuing scholarship will go hand in hand. We believe this model can be developed, and we believe we have seen this vision in the minds of some faculty members with whom we have talked. Unfortunately, the vision is difficult to achieve in a university in which advancement of the discipline through research is regarded by most of the faculty as having priority over the development of an educational program whereby undergraduates learn from the various disciplines significant ideas which are applicable to their own lives and the society of which they are a part. If a program to prepare college teachers is to emerge with a strong and respected degree, it must have strong and aggressive administrative leadership, effective support from a large segment of the faculty, and adequate financial support. The isolated efforts of a few departments are unlikely to achieve this.

EXAMINATIONS

The concern about quality in any new degree program will naturally result in measures to control the kinds of students admitted and the quality of work which they do. The fact, too, that the Doctor of Arts program has been viewed as one which must establish parity with the PhD suggests that most institutions are likely to adopt for the DA program a stance on examinations as strict or perhaps even stricter than that for the PhD. Quality control begins with the admissions process. Some specification with regard to the undergraduate point average, requirements in undergraduate courses relevant to the graduate specialization, the appropriate tests of the Graduate Record Examinations, and letters of recommendation have long been the standard background data for admissions. Although some discussions of the Doctor of Arts degree and, therefore, some programs, have viewed it as starting immediately after the baccalaureate, many of the programs are actually based upon a master's degree. Some programs which imply that the student take his master's degree as a preliminary to the doctorate do not differentiate in the master's program between doctoral students seeking the PhD and those seeking the DA. In fact, since the large majority of the students enrolled in DA programs have been teaching in 4-year or community colleges, most of the candidates have had a master's degree.

In some cases, additional entrance requirements beyond those specified for the PhD have been added to the admissions process for the DA. In part, this grows out of a concern that the students admitted be of high quality, comparable in every way except possibly the research interest to the PhD. But, in addition, there is a concern that the candidates be committed to a career in college teaching, that they have whatever social graces and personality traits are consistent with good teaching. One may suspect that these statements are made more for the effect they create on potential applicants than because there is any clear set of criteria or any real intent to enforce them. We found no institution willing to be specific on personality

traits or the means of appraisal of them, although intimations were given that occasional candidates were discouraged because of lack of sincere interest in teaching. There is one factor that enters into the admissions process with the Doctor of Arts that does not appear in the admissions process for the PhD. Few PhD applicants have done any research and they have little basis for presenting a claim that they are capable of it. But when a person taught for several years, and in terms of promotion and salary increases has apparently been a success, it is more difficult to assert that he is incapable of becoming a good college teacher. We suspect, in fact, that in a few programs too many individuals were accepted rather uncritically because of a concern for building up a student body in the doctoral program and also because of reluctance to face the delicate situation of telling a teacher of some years standing that he does not qualify for a doctoral degree in college teaching. On the whole, however, the admissions process for the Doctor of Arts degree seems to have been handled quite well and with manifest concern that the individuals, although they might be more mature and might have somewhat different interests than the average PhD, would nevertheless be equally capable of sustained and demanding study.

Many of the programs present a formidable list of examinations. Perhaps the most elaborate was found in Slavic Languages at Ohio State University. This program included the following examination requirements:

Three three-hour examinations at end of MA:

Russian Language
Russian Literature (19th and 20th Centuries)
Slavic Linguistics

Comprehensive General Examination:

1. Examination in Russian Language—three four-hour written and a one-hour oral;

2. Three-hour examination in Russian Linguistics; Six-hour examination in Russian Literature; Three-hour examination in Russian Culture, Civilization and Professional Preparation;

3. Oral examination of two hours covering capacity to speak critically in his own field, to synthesize and articulate ideas, etc.;

4. Two-hour final covering teaching experience and essay.

The department obviously had studied this matter at some length and felt that the maintenance of standards in all aspects of language and the teaching of it required some such list as this. On the other hand, it seemed to

us that, with the rather small number of students contemplated in the program, there might be ways of assessing some of the capabilities in a more informal way rather than spending so much time in examinations.

Generally, three to four examinations are required. The first is variously called the preliminary or qualifying examination which involves the certification of basic knowledge in the field and establishes that the student is qualified for advanced work. This preliminary examination may be required during the first term, sometime during the first year or, if the student follows both the master's and doctoral programs in the same institution, it may be equated to the final master's examination.

The second examination is labeled either as a field examination or a comprehensive, although there may be somewhat different implications. In certain fields, chemistry notably, there are a number of clearly identifiable subfields which may be designated as part of a core requirement or may provide the individual with a choice among several alternatives. Examinations then have to be passed in each of these fields. The comprehensive examination may be divided into fields or may be given a broader base. Generally it is required at the completion of all of the course work and tests the student's mastery of the field in respect to both knowledge and research. The comprehensive examination may have both written and oral parts; in some cases the parts seem to be related. The oral examination follows the written comprehensive and may be used to explore some areas on the written comprehensive that were not altogether satisfactory. But the oral examination also offers the opportunity to test the student's communication skills, his ability to think under pressure, and to recall and organize ideas on short notice. In some cases this oral also covers a proposed plan for dissertation research. Two institutions indicated that when the student has satisfactorily passed the comprehensive examination, a certification of candidacy status is issued. The final examination is usually an oral examination on the dissertation. Some universities have dropped this requirement for the PhD and have substituted some type of public presentation, often before a graduate seminar. Thus there is some precedent for not having a formal final examination for new doctorate degrees.

The situation with regard to the Doctor of Arts degree becomes somewhat confusing because of the sequence of requirements and the lack of agreement as to whether the culminating experience is a satisfactory performance in the internship or some type of final thesis or dissertation. We noted at least half a dozen departmental statements that did not include any kind of final examination, indicating either that papers done in seminars took the place of such a thesis or that the thesis itself was a rather perfunctory affair hardly justifying an examination. In a few cases, despite some comments on the necessity of some research activity, there was no

visible thesis requirement. In several cases, too, the final oral covering the dissertation might also cover aspects of teaching, curriculum, and learning. In a few cases it was noted that the final oral might be replaced by a presentation before a seminar, a professional group, or even in a public forum.

Departments apparently are laws unto themselves with regard to some of these requirements. There may be no general statement applying to all departments or, if there is one which indicates that there will be a final examination, it may not be enforced in all cases. However, to get the general weight of thinking with regard to examinations, we tabulated the prevalent pattern in 20 institutions. Of these, 18 had programs in operation and the remaining two had well-developed statements which might be approved in the near future. Some institutions had only one program in operation and others as many as six. Our summary is based upon statements made in catalogs, mimeographed materials, or, in a few cases, by word of mouth. Most of these indicate the intent rather than the practice, for few students have gone through the total program. Of the 20 institutions, we found eight insisting upon a preliminary or qualifying examination soon after the student appears on campus or within the first year. All 20 specify a written comprehensive or field examination in one form or another. Eleven require an oral examination which is an extension of this written comprehensive; and 16 indicate a required final oral, although not every department involved in the DA program on a given campus necessarily held to this requirement.

The treatment of the teaching-learning aspect of the degree requirements in respect to the examination process was decidedly unclear. A number of the institutions indicated that the final oral examination was an opportunity to require that the students relate ideas from various fields to each other and to teaching. In many cases, it was apparently anticipated that the thesis itself would be on a teaching problem and that this would provide the opportunity for questioning in the general area of instruction, curriculum, and evaluation. One institution specified a written examination on curricular development and teaching, aims of education, knowledge of problems and possible solutions. Another institution, specifically the mathematics department, included in its examination program the indication that there would be a separate examination on applied mathematics because of the importance to the undergraduate teacher of being aware of the applications of mathematics in other fields.

We were somewhat taken aback by the emphasis on examinations. Several students complained that the presence of these examinations was a deterrent to throwing oneself fully into one's work. In particular, the comprehensive examination forced a detailed review of material at a time when the student might be thinking ahead to his internship or research. One

person suggested that this might be less significant for a person going into teaching who would have to review materials every time he taught an undergraduate course whereas the PhD specialist might seldom have the need to review materials in some fields of his subject. We found many faculty members who were somewhat bemused by these requirements. The following section is an attempt to reproduce some of the patterns of thought that came out in those discussions and to relate this to some of our own thinking and the views of others who have expressed themselves on the role of examinations.

Faculty Reactions

Many faculty members have little respect for this examination process. Heiss (1970, p.113-114) reports that approximately one-third would modify or drop the requirements. There are several reasons for disenchantment with this procedure. The major justification is quality control, but the examinations may not be effective in this respect. The mere existence of the requirements perhaps provides some protection by forcing both student and professor to take the requirements into account in program planning. The qualifying and comprehensive examinations reinforce any admission or core requirements and also discourage attempts to transfer large amounts of credit (often possible by special action despite formal limitations). Few candidates will risk taking an examination covering courses either not formally studied or taken in another department or institution with somewhat different emphases.

The examination requirements are also a safeguard against faculty members who might permit their candidates to ignore basic areas of study, perhaps by development of highly individualized programs. In short, the examinations *do* buttress the stated requirements of courses and transfer credits.

Since grades in graduate courses are typically A's or B's given indiscriminately with little or no substantiating evidence, the examination presumably provides pressure on the student to master his courses whether or not the professor does any evaluation. If basic graduate classes are large so that the student and his capabilities do not become known to the professor, the additional hurdle is probably necessary. Indeed, course grades may be unnecessary if the examination program is effective.

An examination may take many forms: oral, written, assigned tasks in the field, laboratory, or the production of an essay on an assigned topic. Questions may—as they often are in qualifying examinations—be identical for all students. The questions may be produced or screened by a special committee or by each doctoral committee. Likewise, the responses may be read by a special committee, by the doctoral committee, or by the chairman

and one or more other selected professors. In these successive steps (formulation of questions, variations in responses, differences in expectations and standards applied by the readers) are possibilities which may render the entire process a meaningless task perfunctorily performed by all, or an unreasonable and rigid hurdle which screens out many students or holds them (because of the details included) unnecessarily to the completion of large numbers of courses.

Admission to a program and admission to candidacy are, in most institutions, quite separate actions separated in time by an interval of 2 to 4 years. Continuance after the first admission is conditioned upon passing the qualifying examination. The written comprehensive comes when course work is completed (or nearly so) and presumably determines whether a student has mastered the research methodology of the discipline and of his specialization in it. Hence this examination may be individualized in part or in its entirety. The oral examination is sometimes regarded as a part of the comprehensive examination providing an opportunity to probe deeper in certain areas, possibly those in which the earlier written responses were deemed not entirely adequate by the readers. The oral can also provide some evidence on the ability of the individual to respond quickly and effectively in a group situation. The role of the oral has been pointed to by some professors as providing some indication of teaching ability, but surely its purpose is not this and its relevance to undergraduate instruction is limited.

An oral examination may also be required for presentation, discussion, and approval of the dissertation project. This committee session may be quite perfunctory since the tendency of committee members is to approve any project already having the tacit approval of the committee chairman or dissertation director. However, the dissertation proposal can also be the basis for a penetrating examination of the candidate's knowledge of relevant published research and of research methodology. The candidate who has not thoroughly developed his proposal may find that questioning veers quickly to ascertaining his general competency. A rejection of the proposed topic at this stage may be crucial because of the impact on the candidate and the residual doubts impressed in the minds of the guidance committee.

Approval, on the other hand, only gives the individual status as a degree candidate. This recognition provides assurance that all requirements other than the internship or dissertation have been met. The department of English at the University of Oregon has permitted granting of the Doctor of Arts at this stage. This is clearly an undesirable use of the DA and it casts a shadow over this new development.

The traditional culminating point for the PhD has been a final oral devoted largely to an explication and a defense of the dissertation. Presumably the dissertation is, except for slight changes made necessary by the oral, in its final form. In many departments the final oral is presumably a public session which anyone may attend. In practice, the session is usually limited to the candidate, the members of his committee (or substitutes) and possibly a representative of the graduate dean's office or of the graduate council. Since the dissertation has often been read and approved beforehand by several, if not all, committee members, the oral may be quite relaxed. The candidate has made it when the date is set! For this reason, some institutions have concluded that the final oral should be discarded in favor of a presentation of the dissertation to an advanced graduate research seminar composed usually of both faculty members and advanced students. This returns the final session to something of its public character and it may, indeed, place greater pressure on the individual for careful preparation than the more limited committee session. However, these two approaches seem to differ in their nature. The first always requires a vote and a committee report recording satisfactory performance and represents, therefore, a clear and definite point of closure for the degree. Most institutions using this approach can point to more examples wherein failure or delay has been recorded even at that late stage. Most likely some flaws are noted in the dissertation and the committee approval is deferred or granted conditionally upon some revision.

The seminar report of a dissertation appears to be a less rigorous culminating assessment. Although questions and comments could force some revision, this is less likely than in a situation in which several persons have read the dissertation carefully and have come prepared with specific questions. The seminar presentation seems less likely to provoke a depth of discussion which will reject the dissertation and, in many cases, there is no apparent vehicle for doing so. The seminar does not vote on the quality of the research and presentation. Although it could be arranged that the candidate's committee would consider the presentation and make a decision, this does not seem to happen. There is one other weakness of the seminar report in comparison with the committee-conducted oral. Because of scheduling problems, the seminar report may be made sometime before the dissertation is complete. Delays may result from unanticipated difficulties in the research, in the analysis, or in the writing and formal approval of final copy. The actual date of completion of degree requirements can become lost in a confused morass of writing, rewriting, adding, deleting, and editing which frequently neither basically alters nor significantly improves the dissertation. Some definite culminating point for the individual and for his committee members seems an essential aspect of a doctoral program.

Summary

We suggested earlier in this chapter that we were somewhat dismayed by the attention given to examinations in some programs. The numbers of students have been small, the relationships on the whole have been quite close between faculty members and the Doctor of Arts students, and the examinations appear hardly justifiable. In those programs where there are a few Doctor of Arts candidates and many PhD candidates there may be some point in maintaining the same examinations to assure quality in ability and performance. At the same time it is questionable how far one should go in insisting that persons oriented to undergraduate teaching take exactly the same courses as those pursuing research. Our conviction is that a somewhat different approach in substantive graduate courses is desirable for the prospective teacher. However, we are even more concerned that the formal examination and evaluation program carried out with doctoral students should in some way present a model of what the undergraduate teacher might be expected to do with his own students. We do not see the series of examinations which often places a very high premium on the recall of factual material, as suggesting either the more significant objectives for undergraduate education or the best way in which to emphasize evaluation as a process which provides feedback and motivates students to continue, improve, and deepen their learning. Finally, in the present day there is a considerable degree of emphasis in the direction of encouraging students to engage increasingly in independent efforts of their own in the learning process. To the extent that this is done, it becomes less and less important that all individuals at critical points provide evidence on the same kinds of examinations as to how much they have learned. We believe that evaluation is an important aspect of any educational program, but we would urge that institutions developing a teaching doctorate attempt to develop an evaluation program which motivates and assists the progress of the individual rather than interfering with it. It should, in its nature provide both rigor and flexibility which will serve as a model to these teachers as they engage in their career of undergraduate teaching.

REACTIONS AND CONCERNS OF CANDIDATES AND GRADUATES

In our visits to universities offering the DA, we undertook to interview as many of the students enrolled for the degree as were available. Some were away on internships or had completed their degree and were employed. Some of these were reached by phone or letter. All degree recipients were asked to respond to an extensive questionnaire. The interviews were loosely structured by an outline prepared in advance, but we found most students anxious to talk about their concerns and permitted them to do so, raising additional questions only as necessary. Both currently enrolled students and graduates responded frankly and seemed pleased that a study might underline some of their satisfactions and dissatisfactions with a degree program that they all recognized was still in a formative and possibly critical stage.

The students interviewed usually represented all programs offered and all stages of completion present in the respective institution. Because of the extremes in the interpretation of the DA, the criticisms ranged from one end of the spectrum to the other—from complaints of almost absolute rigidity to structureless flexibility, from the absence of certain courses or characteristics to their overemphasis. The reactions reflect differences in individual expectations, differences among institutions, and differences among programs within institutions. Yet through all run recurrent commendatory and critical comments.

Background

Most students entered the Doctor of Arts program with a master's degree and some experience of teaching, usually in a college—4-year, community, or junior. Some few had high school experience only; some had completed only the undergraduate degree. The teaching experience ranged from a period as a graduate assistant to over 20 years of instruction. Differences in

expectations of what the program would provide and in capability of benefiting from program features were inevitable.

The student directly out of an undergraduate program was sought exclusively in only one institution visited. Here the chairman of the admissions committee is convinced that, unless students are exposed to the program from the outset of their graduate study, there is little hope for their proper development. Only one institution included in its background requirements professional nonteaching achievement—in this instance, publication in the area of creative writing for admission into a DA program in creative writing.

Most students seemed to view the program as most beneficial after prior graduate work had confirmed their choice of a discipline and teaching experience had reinforced their choice of a teaching career. In addition, they felt that the added experience clarified the advantages of the degree and that more constructive input was possible on their part. Those new to graduate work and without teaching experience lacked the goal clarity, the security, and the forceful motivation which characterized those who had some teaching experience. The combination of these two groups made demands on the programs for special preparation, distinctive approaches, and even different courses which remained unsatisfied and sometimes unrecognized.

In addition to their incentive and goal orientation, those coming from the teaching profession brought evaluative criteria against which they weighed the program and the institution and gave vocal expression of both their successes and shortcomings. Where accepted by the institution, their insights and ability to evaluate and to suggest corrective measures are serving the institution and the program. The wealth and variety of background experiences of these students at times seem superior to those the faculty has to offer and are surely more down to earth in impact.

Closely allied with the background of those students admitted, and strongly coloring both their attitude and security, is the fact that some were currently on leave with a secure place to return upon completion of the program. In view of the current job insecurity, the suggestion was made by one director that success of the DA would be secured by the acceptance of only those on leave. For this institution, the suggestion is more appropriate than in many others, since only one year is required for course work and the internship can be taken at the home institution during the second year. While other institutions are also willing to accept faculty on leave, they have doubts about an internship which is basically no more than the resumption of a student's former teaching position. Other programs require more than one year of course work, which would require the student to overstay the usual sabbatical leave. Some students would find this impossible, since they are

not yet eligible for any type of leave, even though they are being pressured to complete work on a terminal degree.

Reasons for Entering the DA Program

Because the objectives of the Doctor of Arts program differ so widely among institutions, students enter for diverse reasons. Most programs advertise a nonresearch-oriented teacher preparation. The opportunity to emphasize teaching and program breadth attracts many. The fact that this is obtainable without the intensified, specific, and, to them, narrow research orientation, makes the Doctor of Arts the ideal answer for most of the students.

Most students feel that content knowledge of the discipline does not suffer. There is merely a transfer of time from specialized research to the problems of instruction and the opportunity through the internship to have first-hand experience under the direction of an experienced college teacher. Most students are content that there is a required research project or thesis, since in most instances it is possible for them to direct this project toward some teaching problem.

Students make clear that they are not disinterested nor do they feel they underestimate the value of research. Theirs is simply the rebellion against some of the superficial demands made in the usual PhD program. As one described it, the effect of inactivity resulting from cold on the learning ability of a cockroach may be interesting as a dissertation topic, but a solid block of time on broadening learning to the point where both zoology and botany can be taught to freshmen seems more appropriate.

Some students had been told or indirectly informed that their current positions were in jeopardy unless they obtained a terminal degree. For these students, especially if they are married or have assumed obligations which preclude the possibility of an extensive period of study, the DA is the only terminal degree they can consider. They assume that it will not take as long as the PhD, that it will make possible a more direct study of applicable material, that financial help can be more easily obtained, and, in some instances, that they can return to their institutions for the internship period. Had there been no pressure by the administration in their institutions, they probably would never have considered a doctorate of any kind.

Candidates become more conscious of the attitude of institutions toward students with specialized PhD preparation when during their internships they experience departmental reactions to those applying for teaching positions. One student tells of the amused irritation of a department head in a community college who received an application from a PhD graduate of an Ivy League institution who, in seeking a position in the area of

humanities, indicated that he would like to teach Seventeenth Century poetry but, if pressed, might consent to teach Eighteenth Century poetry also.

A number of DA candidates selected the program because it permitted students to complete their doctoral programs on a completely part-time basis. This latter practice is not typical, but in those institutions where it exists, candidates are able to engage in full-time activities of a wide variety. Included in the group which benefits from this concession are mothers of small children. At times, all classes in the required category are scheduled for late afternoon or evening.

At times, after a student has made the decision that the DA program is the most appropriate for his goals, he has been attracted to a particular DA program by a faculty member known since undergraduate days, or one who has a national reputation. In one instance, a faculty member has a reputation not only for being committed to the preparation of good teachers, but also for success in preparing students for curriculum development, textbook production, and workshop experience. His students have almost instant employability in addition to the possibility of producing a publishable text.

Again, at times it is the reputation of the institution which impels the student to make the final decision, although, as yet, the choices of the prospective DA are limited.

The choice of the DA in some cases is dictated by the student's inability to complete or even to gain admission to a PhD program. It is unfortunate for those students obviously committed to the Doctor of Arts while capable of a PhD, that a few students give evidence of less ability than that usually required for a doctorate. Some students had come to the DA from the PhD, having completed all course work, but were reluctant to spend the required time on research which they felt would be of questionable value to them in their desire to become good college teachers. A few, however, had sought admission to PhD programs without success or had withdrawn from PhD programs for reasons insufficient to dispel the suspicion that they were not able to cope.

Development and Approval of Program

The development and approval of the individual student's program runs the gamut from almost complete freedom to extensive and specific requirements. In one institution, the students, of whom there are few, were able to form a very close relationship with the program director and achieve almost complete flexibility. Any program planned by the director and

student there is acceptable for the doctoral degree. Students currently include study abroad and a number of creative activities which promise to culminate in artistic and literary works of merit. At the other end of the continuum, and most commonly in mathematics, it seems that the major attraction to the DA program is the reduction or absence of the dissertation. In one instance, there is no difference between course requirements (which are quite rigid) for the PhD and the DA, no required internship, and no evidence of increased breadth. Even the dissertation requirement, which permits some flexibility, can be the usual research pattern if the students wish. Students in this type of mathematics program are in full agreement with the rationale.

Most institutions fall somewhere in between these extremes. Advisers assist in the planning of programs, but give sufficient freedom to the individual to adjust to background experience and education.

Students report that the internship requirement is frequently determined by the student's background. Those who protest that they have taught for a number of years are not necessarily required to demonstrate that they have taught well or that they are fully aware of new methods, innovative practices, and technology. They simply substitute other courses for the requirement. For some students, the internship is merely a graduate assistantship; for others, it has provided the ideal of freedom to learn and experiment with methods and new technology, and to receive expert advice and counsel from a senior successful teacher.

Research

Students view research in a variety of ways. Some feel that it is not necessary to the DA and would like to see it replaced by something more in keeping with the teaching function. Others feel that research is a vital part of teaching, but prefer that it be more practical. They want to understand research so that they can apply it to their teaching.

Satisfactions, Dissatisfactions, and Problems

A recurrent complaint of students is that, although they have opportunities to feed back reactions to directors and administrators, there is little opportunity to assist in planning which would prevent some of the abuses, misunderstandings, and waste of time.

Some students regard the DA as a super PhD, meaning that it requires everything that the PhD demands and, in addition, certain teaching-related courses and experiences. Others are pleased that the DA is almost the same as the PhD without additional teaching-related experiences. But far too many students are discontent with the heavy load of course work in the DA

program. They recognize that directors and departments wish to avoid the accusation that the DA is a watered-down PhD, but they feel strongly that the DA concept is respectable and should provide greater freedom in preparing students for successful college teaching.

Concern about financial aid is prominent. There is no way for most DA students to markedly reduce expenditures, since most have dependents and are haunted by the suspension or reduction of highly respectable salaries while in the program. Reduced numbers of admissions already give evidence of the reluctance of faculty members to exchange what may be short-term job security for instant hardship and delayed gratification. Some individuals, too, are learning that committees and advisers have a way of encouraging or demanding additional course work which lengthens out the program.

Students in the social sciences generally regret lack of breadth in their programs. They find few faculty members who can integrate such areas as economics, history, and government. Even though some programs encourage students to spread their study over several of the social sciences, the students find the experience fractured or segmented rather than integrated.

Students in many of the institutions visited believed that the printed brochures describing internship experiences were misleading, in that the actual practice amounted only to a graduate assistantship. One student said that he felt constrained to maintain the existing pattern of dry lecturing with no opportunity to innovate or encourage student participation. Internships are difficult to obtain at outside institutions and, at times, students have been encouraged to arrange their own. This, they feel, is a cop-out on the part of the institution. Although the institutions found many community and liberal arts colleges favorable to the idea of accepting interns, later contacts indicated that no formal authorization had been made and no funds were available. Some colleges which express willingness to accept interns will do so only on a gratis basis.

Most students interviewed had not yet reached the dissertation stage, but they repeatedly expressed doubts as to just what might be acceptable. One quite specific dissatisfaction with the dissertation requirements was that they permitted and encouraged specialized research but required a final chapter demonstrating its possible use in the classroom.

The small number of students in most DA programs constitutes a problem which is developing into a vicious circle. Because there are too few students, it is impossible to offer appropriate courses either in the department or in higher education generally. The program thus fails to accomplish its goals and tends to become more departmentalized and

isolated, even within the department, and the number of students becomes still smaller. One institution, for example, planned certain higher education courses to be shared by *all* DA students. When the numbers failed to materialize, the DA's were placed in courses with an overpowering number of education majors with entirely different objectives. DA students became so disinterested in what seemed a waste of time that some even left the program. Most students in the DA programs would appreciate some means by which all candidates would share their experiences, variety in backgrounds, and experiences with disciplines. With few students in the DA program, there is no formal provision for this sharing.

One of the concerns expressed in almost every interview is the apprehension about future employment in reference to job availability and degree acceptance. Outside of a few departments where students have heard of 100% employment of graduates of that department and a university or two which have an exceptional record of community or junior college employment of their graduates, there is little optimism about placement. Only five institutions, to our knowledge, have graduated DA students, and of these only two have graduated over four students. Interest in the DA recipients is, therefore, uncertain. The only comfortable and secure programs are those with students on leave from institutions which expect them back. Students and faculty alike remark on the unfortunate timing in initiating the DA programs. The outcome may say less about their merit than about the critical period in which they were launched.

The students recognize that the faculty generally know only the PhD and regard it as the program in which they received their introduction to teaching. They are not surprised that many faculty do not have a kind word for the DA program. Obviously, superior students who freely elect it and testify to its value help to correct this, but one candidate who obviously lacks ability undoes the gain. The students also realize that, at times, the faculty disdain stems from a political issue or the lack of status of the faculty member who directs the program. They know, too, that the possible elimination of a PhD program or ambitions to start one may haunt the DA. A few students commented that, if the DA program becomes too popular or successful in competition with a PhD in the department, faculty reaction can be expected. Where such climates exist, it is not surprising that students are restless and uncertain.

A few students found it impossible to manage a level of scholarship satisfactory to themselves because of the scholarship or fellowship requirements which demanded excessive teaching or service time. Exploitation of graduate students is nothing new; and some of this can be explained by the exigencies of new programs. Yet the character and reputation of the degree is clearly at stake in this case.

Many students feel that admission to DA programs should be granted only to mature students who are ready to profit from the experience, and they believe this requires some prior experience with teaching.

Only a few students currently enrolled in the Doctor of Arts programs have participated in internships because most programs are in their primary stages. Some interns were off campus during the interviews and were not available for discussion. Many of the concerns about internships, therefore, represented anticipation rather than experience.

Students feel the uniformity of requiring the same kind of internship for all students is unrealistic and nonproductive for those who have already had years of successful teaching experience. They suggest not an automatic exemption, but an evaluation of the student's teaching ability and an experience based on the findings. Students with a great deal of experience want opportunities to update themselves on the new technology, new theories of learning, and a chance to engage in experiences which differ from their previous work. Those who return to their own institutions are quite content that this constitutes an internship, although many of the faculty disagree. Those who are required to intern in unfamiliar and remote institutions (especially if they are students with families) feel that it is absolutely essential that they be paid at going rates. Conscious of the fact that it is difficult for the degree granting institution to find nearby colleges with the necessary funds, some students suggested that there be a more concerted effort among those institutions which grant the DA to exchange students. They suggested also that more publicity for the DA might increase the number of institutions willing to employ interns.

In some instances, students complained about inequity in remuneration for teaching resulting from a prohibition against students receiving pay for experiences which earned credits. Students felt it ludicrous (and so do we) that one term they might be engaged as a graduate assistant receiving pay for instruction, only to shift the next term to paying for the instruction because they were being credited with an internship. This was true only in a few institutions, and even there exceptions were being made for some students. Needless to say, the exceptions create further inequities.

A few students felt that the library resources were inadequate and that laboratory equipment and materials were lacking. When student projects are related to curriculum development (as these were), they raise doubts about the capability of the institution to launch the program.

Education courses, loosely organized seminars on teaching, and lectures about higher education problems were strongly criticized in some instances. In most of these universities, the college or department of education is not highly respected, and association with it is not relished.

Students are torn between recognition of the worth of some study or updating in higher education and the resentment of the approach taken by "educationists." The overemphasis on students' needs and the sheer inappropriateness of much of the material offered were mentioned. In a few institutions, there are simply too many requirements, but more often the contact with education courses is not well planned and the topics are useless. In one instance, a statistics course in an otherwise well-balanced and well-received program of higher education, inclusive of philosophy, history, curriculum problems, etc., was so narrowly conceived and so inappropriate to the students' needs that students were in revolt. In some cases, the higher education courses overlap and create boredom and disinterest. In others, information is not sufficiently updated to be helpful and materials sufficiently applicable and specific to college teachers are not included. Another shortcoming of education courses or seminars is in the delimiting of topics to the particular institution or to the state or area of the country. One student pointed out the need to know more about faculty bargaining practices even though there is no local problem in this area. Another student complained about the overspecific approach of a seminar on the particular institution which included a discussion of maintenance problems, state legislative activity, and state coordination.

Few students achieve the overall feeling that the program is unified and that each component—the course work, the research, the dissertation, the educational seminars—is part of a well-conceived and carefully implemented whole. Most frequently it is the student's obligation, and not one exercised easily, to weld them together and make from the entire experience a logical, sequential, and meaningful program. More often than not, all of the components for a successful program are not present, and one has the feeling that everything is in a state of flux and evolvement dependent upon a wide range of stimuli including the financial picture, available faculty, the students attracted, departmental acceptance, and administrative approval. Administrators are in the unenviable position, when it is they who have initiated the program, of defending it at both ends—assuring those who evaluate or financially support the venture that it is eminently successful, progressive, and well received. At the same time, they must criticize it rigorously to guarantee fulfillment of the pronounced expectations. In this, they run some risk of alienating those on campus who find it difficult to correct the abuses. Students both sense and despair of this schizophrenia.

In spite of the extensive expressions of student disappointment and criticisms of present theory and practice in the implementation of the Doctor of Arts programs, there is much that students find satisfying and praiseworthy in these programs. After all, our interviews provided an opportunity for criticism which students had not dared to communicate locally and must be evaluated accordingly. As we shall see in considering

questionnaire returns from DA graduates, many of those who have graduated from the program are more than satisfied with what they have received and indicate that they have no regrets about having chosen this type of terminal degree.

High on the list of positive features experienced by those still in the program is the fact that this alternate route to the doctorate allows them to prepare to do what they most love—teach undergraduates. The opportunity to use the dissertation time to experiment with learning techniques, to bring oneself up to date with current research and its possible application to teaching, especially if one has been engaged in teaching without the extra time to do these things, has brought something akin to pure joy to many of these students. Time to find security in teaching both introductory and advanced courses for those who have never taught and, at the same time, receive the terminal degree, which permits at least the possibility of acceptance accorded the possessor of a doctorate, is something beyond the previous expectations of many; their appreciation is obvious. Possibly the most enthusiastic of all are those who, because they are older or less affluent, had long since given up aspirations to a doctorate. These students, especially if they have taught for a number of years, often serve as the leaven of the group—the senior senators who know what they want, can evaluate the appropriateness of a requirement or offering, and can tide the group over the rough spots when an unexpected, ill-conceived or ill-proposed addition to or correction of the program is introduced.

Where the DA program is interdisciplinary, either in general practice or at least in interpretation when the student has the option to make it so, there is great enthusiasm. The student who desires to be more than a teacher of zoology is pleased at the opportunity to venture into botany and prepare to meet the needs found in the community colleges, junior colleges, and baccalaureate institutions. Even though a number of programs do not encourage students to participate actively in the construction of the program, there is more opportunity for student feedback than is experienced in the typical PhD program. Students appreciate the chance to make suggestions—especially when their comments are regarded with respect and attempts are made to adjust programs and courses to student evaluation.

In institutions where there is an attempt to tailor the program to the individual student, this constitutes a real force in producing an enthusiastic response. The opportunity which the DA presents for students to become both good teachers and good researchers is a very attractive one to many students. Where courses in higher education are well chosen and well taught, not only is there interest and enthusiasm on the part of the students and the development of a sense of security in their future role as faculty members, but there also develops a greater maturity in their present

acceptance of many of the structural and political problems which develop in all institutions. More than the usual PhD graduate students, they seem to take things in stride and to appreciate the hardships faced by administrators in the developing and sustaining of a program such as the DA.

One of the most satisfactory aspects of the DA program, in the eyes of the students who have aspirations for teaching in community or junior colleges, is the fact that they get the impression from administrators of those institutions that the DA graduate is "with it" as opposed to the PhD graduate who is "out of it." This comes from the fact, as mentioned earlier, that the community college is more in need of generalists than specialists, and DA students feel that they most adequately satisfy this need.

Reactions of Graduates of DA Programs

As of spring, 1973, five institutions had graduated students with the Doctor of Arts degree, one as early as 1968. The entire group produced 27 graduates in 1972. There may have been others of which we are unaware. The institutions and their numbers are as follows:

Carnegie-Mellon University	46
University of Northern Colorado	27
University of North Dakota	4
University of Mississippi	3
University of Washington	3
	83

Graduates doubled, going from 12 to 24 from 1970 to 1971, but leveled off at 27 in 1972.

Questionnaires, with two follow-ups, went to all graduates and yielded a return of 79%. Although responses provide a variety of information, graduates themselves are the first to admit that theirs is only part of the Doctor of Arts picture, since at the time of their attendance it was in its developmental stages. Some had straddled two programs, since in some institutions the DA had been born out of either the PhD or the EdD, and the students had been carried along with the transition. Of the 25 respondents who had this experience, 18 had entered the program as EdD and 7 as PhD candidates.

Graduates' Age, Sex, Majors

As with those currently enrolled in Doctor of Arts programs, males dominate the scene. Of the 66, 81.8% (54) are men and 18.2% (12) are women. Their ages cover a wide range, as indicated by the following distribution:

24-30	17 (25.7%)
31-35	26 (39.3%)
36-40	11 (16.6%)
41-45	6 (9.0%)
46-50	5 (7.5%)
No reply	1 (1.5%)

The largest number of graduates have completed programs in history, with mathematics coming second, and English ranking third:

Botany	3	History	20
Biology	1	Mathematics	19
Chemistry	5	Music	3
English	6	Geography	1
Fine Arts	5	Zoology	1
German	2		

Educational Background and Experience of Students

Of the 66 students who responded out of the 83 graduates, 88% indicated that they held master's degrees prior to their admission to the Doctor of Arts program; the others held only the BA or BS.

Five had no experience teaching on either secondary or collegiate level, but most graduates had taught between 1 and 5 years prior to achieving their degree. Sixty-one percent had experience on the secondary level; most of them had taught between 1 and 5 years; 65% had taught in a college or university, with an additional two having had a prior teaching assistantship, and 23 (34.8%) had no previous experience in college teaching.

Attitude toward Program

Nearly one-half of the students (46.9%) found "great satisfaction" in the program and another 45.4% found "satisfaction," with only four students indicating uncertainty and one student refusing to commit himself. Satisfaction, therefore, was felt by over 90% of the respondents.

The majority (48.4%) found the professional experience (teaching, seminars, internship, and courses preparatory to teaching) adequate, with another 33.3% believing it more than adequate. More students found the review of research in the program "more than adequate" (46.9%) with another 39.3% finding it adequate.

Only about 20% of the students shared activities with students of other departments by way of seminars. A few more had experienced occasional discussions, and about 38% reported informal meetings. These shared experiences were not available to many students because theirs was the only DA department in the institution at the time.

Job Problems

Twenty-one of the students (31.8%) had been granted leaves and were able to return to their old institutions. Of those who actually needed to obtain positions, 26.6% (12) indicated that they had difficulty, and 66.6% (30) indicated that they had no difficulty. Students attribute difficulty in placement to the job market rather than the degree. Many respondents commented on the lack of understanding of the DA by potential employers. They also criticized the failure of institutions to assist in locating positions. Although 87.8% of the students are presently employed in teaching or related positions, some found only high school teaching positions or jobs related to secondary education. Two are part-time teachers, and another graduate has a temporary position. Eight DA's indicated that they were not presently teaching. Of these eight, one is a free-lance artist, two are housewives, another is a director of institutional research, one is a vice-principal of a high school, one a director of social studies, another an associate dean in a college, and the last reported great difficulty in finding a position (in the same geographical area as her husband, who is a college teacher).

Topics to Be Treated in the Program

Graduates were asked to respond to certain topics which are considered by many educators to be important to the college faculty member. Over half of the students felt that the advising and counseling role, educational philosophy, educational technology, faculty responsibility and ethics, the faculty role in governance, the history and problems of higher education were not appropriate *required* topics. Graduates were equally divided over the importance of discussions of the liberal arts curriculum. Those topics which over one-half of the DA's felt should be included were course development, evaluation methods, instructional methodology, and the psychology of human learning. One may conclude that the majority of those who are interested in college teaching see their role as that of instructor. They either accept little obligation for learning about their role in the entire structure of higher education and its purposes, or perhaps they feel

(because of past experiences) that they already understand this or will shortly do so on an in-service basis. Certainly the majority do not feel the need for this in the DA program.

Cost

Nearly one-half of the graduates felt that the cost of the program was about the same as that for the PhD, with one-third feeling that they could not estimate the difference. About 20% felt the cost had been less and associated this with their perceptions of the greater length of time it takes to complete a PhD dissertation. No one indicated that the cost was greater.

Integration

About 74% of the graduates felt that there had been some unification of the major, the internship, and the professional courses; about 44% of them felt that this was done to a great extent.

Techniques Learned

A high percentage of students, ranging from over one-half to 94%, according to the particular technique, felt that they had not been exposed to a variety of techniques of instruction. Most notably lacking was any preparation in the area of closed circuit television and computer-assisted instruction; over 90% of the students had no background in either. About 64% of the students did not feel they had been exposed to the interdisciplinary approach, and about 58% had no experience in the direction of independent study.

Program Planning

The first entrants to newly established programs were able to work closely with faculty in planning their curricula. This gave most of them a high degree of flexibility. Some students, however, noted a marked tendency toward more rigidity as the program progressed.

There is evidence in their responses that student background did play an important role in determining requirements. Some who came with strong discipline backgrounds concentrated more heavily on the education courses, and experienced teachers were permitted more latitude in their courses. Evaluation of previous experience and education, together with personal needs and existing departmental requirements, formed the triple approach to the formulation of total requirements.

In most cases, the student and adviser planned the program after which a committee and/or department approved it. Mathematics more than any other discipline required specific courses in abundance, leaving the remainder to the student and his adviser. The student's perceptions, of course, depend upon his idea of what he wants and how closely requirements match his desires. In one mathematics program, which we viewed as highly structured and prescribed, the graduates of the program reported adequate flexibility.

Mathematics DA's were generally intent on getting as many courses as possible over the whole range of mathematics in order to become capable of teaching a wide variety of courses. Satisfaction at having been so prepared was expressed frequently. These students tended, in fact, to suggest, in their open-ended comments, that nothing be done to divert the program from its almost exclusively mathematics orientation.

In departments known to allow greater flexibility in the choice of courses, respondents, although for the most part indicating that the adviser's approval was necessary, mentioned a variety of paths toward complete approval. Seven graduates of one department mentioned seven different paths toward approval: (1) department head and adviser; (2) negotiation with several faculty members; (3) faculty adviser and director of DA; (4) graduate committee; (5) consultation with staff; (6) adviser approved by committee; (7) conference with directors.

Although these responses represent graduates of three different years, there are still some differences among the perceptions of students who graduated the same year. One might conclude that program flexibility was extended to the process of approval. Juxtaposed to the current interview responses of students currently enrolled, however, there appears to be a need for improvement in communication with students as to the proper or approved procedure, or perhaps even more fundamentally, a more well-defined process of program approval.

Reasons for Entering the Program

The most frequently mentioned reason for entering the Doctor of Arts program was a desire for more adequate preparation for undergraduate teaching without the demands for what DA graduates consider excessively specialized and meaningless research.

Advantages which they considered characteristic of the DA program were opportunities for both breadth as well as depth within a chosen discipline. The DA concept of a dissertation, with its broader approach to research and familiarity with a wider range of studies in the area to be taught, brought similar satisfaction. Together with a lack of respect for the EdD, this

impelled students toward the degree which offered what they considered the advantages of the EdD (including no language requirement) without the educational label.

Almost as often, graduates mentioned the need for a terminal degree for position advancement in higher education, salary increases, added eligibility for top opportunities, and recognition in a discipline.

A student who was able to obtain a position as an assistant professor in a state university soon after entering the market expressed satisfaction with the concept of the DA in these words:

I believe the PhD should remain the primary degree for those who are training graduate students in a research field. This does not mean, however, that the DA recipient need feel that he should not and cannot publish articles in scholarly journals as well as material of a more general nature. I do, however, consider myself a teacher first and a researcher second. For individuals with this orientation, I feel the DA is an excellent alternative.

Another student graduating in 1972, now teaching in a high school, had this to say:

. . . I consider my DA to be virtually useless, not so much because of my inherent weakness, but because the jobs simply do not exist for which it prepared me. However, to end on an upbeat note, I am certainly grateful that my doctorate is a DA, not a PhD, or even high school teaching would be closed to me. . . . I am a well-trained historian . . . I have several years experience in curriculum development and have published extensively, yet . . . that experience, too, is irrelevant.

Perhaps one of the most disappointed graduates of a DA program finished in 1972. She had entered with only the BA and no experience in any kind of teaching. She indicated that there was no advising and that she learned later on that another student had been urged not to go into the program since it was designed for "weaker" people. From the beginning she felt like a second-class citizen.

She feels that she knows nothing about research in her field and remains unemployed:

I have been actively looking for a job for two years, all over the country, and have found nothing. One reason is a misconception about the DA. I had eight interviews at the last MLA Convention (NY), and most *assumed* I wanted to spend my life teaching methodology courses. I don't—I want to be a good undergraduate language and literature teacher, and I feel my goal is consistent with that of the DA idea. . . .

It is perhaps ironic that the DA's provision of requiring 18 hours outside the major department is what has kept me sane and optimistic. I took most of my hours in higher education, and hope to move into community college administration if . . . I am unable to find a teaching job with my degree.

Students are aware of the danger of the presence of high school teachers in the DA program:

Most of the people in the program when I was there were former high school teachers, and many probably could not get into a traditional PhD program. Thus, I am afraid it can look very much like a "cheap" PhD.

Even though the announced purpose of the DA is preparing college teachers, there still seems to be some feeling among faculty members that it is equivalent to an EdD:

I was told the DA degree prepared one more for department chairmanships and curriculum work than for actual college teaching, and that college opportunities would come more in an English education department of a college than in an English department.

Graduates are tending to become even more defensive as they realize the generality of misunderstanding of what the Doctor of Arts is:

The main weakness of the DA, however, is not what it is, but what people *think* it is. Academic snobbery makes it difficult for someone with a DA to get into a good undergraduate English department in a four-year college, especially now with a plethora of PhD's on the market. Even someone such as I, who dropped out of a PhD program to opt for the DA, feels apologetic about having it. I have even considered returning to graduate school to get a PhD. Maybe one of each is needed! Seriously, I think maybe the DA should require an extended scholarly paper in the subject matter field *as well as* internship and curriculum dissertation. This would give the holder a subject area "specialization" as well as expertise in pedagogy and educational research. Perhaps he would be more "respectable" to traditional academic types.

Over and over again, the DA's plead that something be done to influence public understanding of the Doctor of Arts:

I feel it is important that a considerable effort be made to influence attitudes in the academic community to recognize the DA as a valid degree and to accept such people as being fully equivalent (to the PhD) in educational background as teachers.

Students do not feel that the institutions which encourage them into the DA program are doing enough to gain esteem for their degree or to help them find employment:

I feel strongly about the need for colleges to recognize the DA program and for help in securing a job on the college level. My own university is not doing an active job of selling its graduates or the fine work that has been done during the past three years. I am beginning to feel the pangs of being in a minority group—over-educated for high school and community college and perhaps somewhat misunderstood by colleges looking for teachers. . . . Where are the colleges that want quality teaching and experience in course development?

One graduate pointed out what he sees as a danger in providing a definition for the Doctor of Arts:

The key problem with the DA as a degree is that no one can really define what it means. Though I have had no special problems, I assume that universities who receive applications for positions by DA's must have some qualms now and then. But to stamp the DA on a national basis as a program that reduces "such and such" time and research may be a distinct disservice to many individuals who could just as well have received a PhD as a DA. Clearly, some definition of the DA is needed, but acceptance of the degree will ultimately come due to the efforts of the recipients.

Another student sees the possibility of a certain limitation if the definition of the DA becomes too narrow:

The catalog states that the DA degree program is "designed to produce teachers for the four-year and two-year colleges in subject matter fields." This emphasis upon just two- and four-year colleges seems to exclude universities or schools with graduate degree programs. While I agree that the research-oriented PhD degree may be more necessary for such schools, I do think that there is room for improvement in teaching at universities. I have had many noted PhD's who are excellent at directing research seminars and independent study but who were poor in undergraduate classes either because of lack of methodology, preparation, or maybe just interest. Thus, I think the DA holder can also have a place on the university level.

A common plea both of graduates and students currently enrolled is the request for more effort to recruit a DA to the faculty of the institution offering the DA program:

Most of the staff involved were PhD's, EdD's, or MFA's. Therefore, may I suggest that some effort be made to aid in recruiting DA people into the faculties of those universities with the program or those planning the program.

A graduate expressing his feeling that he should have had more preparation for teaching hastened to avoid being interpreted as interested in what the education department might offer:

I would have liked one or more such seminars dealing in more detail with such things as course development, instructional methods, teaching techniques, etc. But, I would insist that such seminars be offered in the history department, not in the school of education, so that they would be concerned with applying these topics to specifically college-level history teaching.

Summary

It is obvious to us from the reactions of DA candidates, degree recipients, and faculty in the departments offering the DA that two major issues have not been resolved, perhaps not even faced. The institutions have not yet learned to reckon with the different types of students attracted to the DA

program. The DA candidate with a number of years of teaching experience not only wants input into his program, but he also has a need to continue his professional activities in higher education. If institutions continue the practice of accepting both novices to the field of college instruction and those who temporarily suspend their vigorous and experienced activities, they will have to give more attention to the differing needs of both types of students or face continually mounting disgruntlement and disillusionment. There is irony in the fact that, in those institutions visited, the experienced college teachers in the DA program gave strong indication of leadership and not infrequently were the students who "held the program together" encouraging students and playing the "big brother" or "big sister" role while, at the same time, indicating, gently at the moment, that their own needs were not fully met. This group of mature teachers could be most useful in providing a unifying force if institutions are open enough to recognize their possible contribution and astute enough to identify those who can contribute. This underuse apparently follows some DA's into their faculty positions after completion of their program:

> . . . colleges do not *use* the expertise of the DA. In two years as an assistant professor at a community college, I have taught 15 hours of regular classes each semester, and have never been called upon to help develop new courses, to make recommendations on existing ones, etc. I am used as labor in exactly the same way as are the rest of the MA's in the department (chairman has a PhD of course). Why did they want a DA, except for the appearance of the catalogue?

The second issue, noted by many students and graduates, is the fact that in institutions where the DA is offered, there has been no serious attempt to improve the undergraduate teaching which could and should serve as a model for DA candidates. Indeed, the institutions offering the DA are not enthusiastic about employing DA's. The "sales" pitch praising the merits of the DA, through which they attracted students, is apparently not applicable to themselves. And, in a few cases where DA's have been employed, promotion is uncertain. A DA employed in his alma mater has this to say:

> . . . I expect that I will not be promoted because of my lack of available research. . . . This degree does shackle those who accept positions at institutions where "publish or perish" is the rule and where excellence in teaching is not rewarded.

Another DA recipient from another department in the same institution comments:

> I would not now be "acceptable" in our History Department even though my degree is in history. This is in spite of the fact that they often hire people with all their course work but no dissertation and then permit them to finish.

At times, in fact, after talking with faculty and mature DA candidates in the same department, we felt that the blind were attempting to draw those with partial vision along their own benighted path rather than to provide them with the spectacles, and experience in their use, which would produce a different and better breed of undergraduate teachers. But we remind ourselves, as do many of the DA candidates and recipients, that acceptance of the need for a teaching degree has been long in coming and only a second or third generation may bring it to fruition. We did detect that a few research PhD's, by their contact with the DA program, were becoming more aware of their own teaching, if only to the extent of being defensive about it.

Internship

A second questionnaire seeking details on the internship and dissertation brought responses from 44 students. Some of their responses differed in substance from descriptive material provided by the institutions.

In three of the four institutions with graduates who responded, an internship was required. The fourth, an institution in transition from an EdD program, had not yet implemented the requirement, but more than half of the graduates had served as teaching assistants for several terms.

In some institutions departments exempt students from the internship or require a longer period as they wish. The mathematics departments seemed more likely than others to omit the teaching internship (with the enthusiastic approval of their students). Most of the internships consisted of a semester or two teaching on the campus of the institution granting the degree.

Internships other than teaching were accepted for those students preparing for careers in secondary education. A few students preparing for college teaching developed and tested new curricular materials. As one student described it:

> The program . . . successfully blended substantive history with historical and educational methodology. . . . DA candidates received excellent training in traditional history courses, historical research, curriculum development and teacher training.

A student who had 18 years of teaching experience substituted an experience geared to his objective of improving the teaching of teachers. He served as a consultant for the education center doing demonstration teaching, demonstrating new materials and lecturing. One student, preparing to teach future English teachers took a two-part internship. She taught in a high school using a unit of the text she had just edited and also observed another experienced instructor using her text. She also assisted in

an English methods seminar for senior English majors and observed them during their student-teaching experience.

Although most students were given full responsibility for their classes during their internship, some were not. One student who reported that she "assisted with ideas and taught once in awhile," continued:

> My internship experience was not a strong point in my program, as I had already been teaching a variety of courses on high school and college level for nine years.

A few graduates who reported that attendance at faculty meetings by interns was not allowed, felt it would have been helpful. Rarely did interns serve as members of faculty committees. Most of the interns were limited to instruction in lower division courses. Their internship experiences were observed and usually evaluated, and a successful experience was required for graduation, but the amount and nature of evaluation differed.

One institution urged the students in one instance, the interns, to make comments to the department chairman and other faculty members. Student evaluation forms supplemented faculty evaluation. Respondents favored evaluation but pointed out that if too prominent, it could be a threat. Television tape recording with review by the student himself, the adviser, or a committee, was found to be beneficial and "startling" by those experiencing it. At times when the student was already very competent and experienced, the appraisal appears to have been more of a critique of the usefulness of the particular materials and the media than an evaluation of the student. Doctor of Arts students with years of prior experience sometimes begrudge the requirement of further "practice" but more often they take exception to the type of requirement:

> I fully agree that any experienced teacher can learn something from completing the internship, but in looking back on my experience, I think that each internship should be designed on an individual basis in order to take into account such things as previous experience of the intern or any other similar individual differences.

Or they resent the attitude toward the intern:

> . . . some colleges view the intern as an additional faculty member for a semester—a cheap addition—so that the learning experience for the intern tends to be forgotten.

For those with less experience, the internship sometimes threw students on their own resources without adequate supervision or prior seminars on teaching:

> The biggest weakness in my program was the lack of any instruction in the 'art' of classroom teaching. As teaching assistants, we taught the freshman and sophomore courses, and I learned from experience what to do and not do in a classroom and how to conduct my class and plan lectures.

Nevertheless, most students who served internships welcomed the experience and applauded it:

> It is my opinion that nothing helped me more than my rather extensive assistantship teaching experience. I knew that I was under pressure to do a good job and, yet, I was allowed to accomplish that goal my own way.
>
> . . .
>
> I can, in retrospect, judge this experience (internship) as one of the most valuable of my experiences.

They found that the internship allowed them to experiment, organize and synthesize ideas that had been developing over the years, to try a variety of teaching materials, to use the video taping for evaluating one's classroom performance. The faculty, with their interest and encouragement, were cited as among the most significant factors contributing to success and were called "a breath of fresh air to the spirit and brilliant in their own right."

Dissertation

All students indicated that a dissertation or its equivalent was required. At times it was described as a "doctoral thesis-project" somewhere between a Master's thesis and a PhD or EdD dissertation or as independent research "written in publishable form with a final oral examination by a committee covering the research topic."

In most cases there was no required length but the size in actual practice was usually between 90 and 140 pages. One-half were from 49 to 129 pages and the others extended from 130 to 525 pages; most of the latter were over 200 pages in length. Among the more lengthy were those dealing with curriculum, but a good many were not. An example of the latter was a 215 page mathematics dissertation, "A Treatise on Real Compact Spaces," built on the basic philosophy "that it should be an expository work worthy of publication that would have significance and utility for the mathematical research community." Another dissertation of 350 pages on Viking jewelry reported on a firsthand survey in Sweden on the construction implements of jewelry of early Vikings as well as a personally performed X-ray analysis divulging the methods of jewelry construction.

A few students in two institutions were able to complete their entire program as part-time students. A number of others did some part-time study toward the completion but the majority studied full time during the entire period. It is difficult to determine the actual amount of time consumed in the completion of the degree. Students were asked to indicate the number of consecutive terms or semesters required but were not questioned as to the number of courses pursued during each period or their other involvements

or responsibilities which may have diminished their actual study time. It can be said, however, that a few students were able to complete their requirements in two years after the master's degree and one student finished by doing part-time study for four consecutive semesters including summer sessions.

In very few instances did an institution appear to require an integration of all the components: the course work, internship, and the dissertation. When any integration was actually required, which was not usual, it was between the dissertation and course work. Students felt, however, that some attempt was made to integrate the dissertation and course work even when the program did not require it; but rarely was there an attempt to integrate the internship with either the dissertation or course work. Whatever integration was accomplished seemed more dependent upon student efforts than upon a definite plan. Those students who desired the integration of all three components claimed to have achieved it; those who wanted no relationship usually did not find one. A number of students doubted the value of the dissertation, claiming that it has not yet helped, nor do they expect it to help, their teaching. They hasten to say that it did have some value but its appropriateness to their teaching preparation still escapes them. Others are quite appreciative:

The research was very useful and rewarding, and I consider the dissertation as much a part of the program as the course work.

. . .

My dissertation, and all that went into it, was the strongest part of the program to me. It wasn't just a hurdle, it was a meaningful educational experience.

Another student while disclaiming the value of the dissertation in preparation for teaching conceded:

It made me aware that a good teacher is one who must be actively engaged in research.

Students viewed the dissertation as not inferior to the PhD research but different in its objectives:

I think the strong point of my thesis was the insistence that it be a strong piece of mathematics and that the evaluation of that strength should come from the mathematical research community. In that way the thesis would not be weakened by the projection of it as some kind of 'education requirement' in the negative sense and looked down upon by the graduate-level academic community. There is also a weakness to that point of view because the tendency on the part of a particular advisor may be to force the student into what is essentially a PhD thesis anyway (perhaps 'watered down') whereas to my thinking the two should be conceptually quite distinct although equally valued.

Some values of the dissertation reported by the DA recipients were that it made them familiar with journals in the particular discipline; improved their written expression; taught self-discipline; improved their understanding of research; provided an increase in confidence which carried over into teaching; stimulated interest in materials relevant to undergraduate classes; enriched appreciation for the discipline and research "so that my enthusiasm is contagious to my students"; and developed a clarity of thought which brought about better verbal communication with students in courses. Those who definitely used their dissertations in conjunction with teaching and their course work were enthusiastic about the value both as a learning experience and as a selling point in seeking a position.

For some the dissertation provided a means of drawing together course work and the internship. These individuals seem to be the most enthusiastic about the dissertation and about the program itself:

I feel that my dissertation experience provided excellent preparation for curriculum development. A particularly valuable aspect of the dissertation was the requirement that I teach the materials I developed to the kinds of students . . . for whom they were developed. A further valuable requirement was that I reuse those materials in light of my classroom experience and the experience of other teachers who used my materials. . . . My course work provided a context for the subject content of my curriculum project. . . . The dissertation experience had been carefully planned to integrate scholarly research and pedagogy with direct experience writing and teaching curriculum.

The dissertation required that I serve two masters, i.e., those in history and those in education. It called for implementing many sectors of my course work. Most important was the realization that the unit . . . being prepared had to be taught in a classroom.

This experience has affected my subsequent work. It has helped to ensure that lessons be grounded on solid academic grounds and [demanded] greater attention to the best strategy for teaching. . . . It has helped to bridge the gap between content and methodology.

. . .

In the three years since I left, I am more convinced than ever of the validity and rationale for the Doctor of Arts program. It is not a 'watered-down' PhD with more attention being given to the quality of teaching; the Doctor of Arts is more necessary than ever.

The Doctor of Arts should help to limit the unnecessary and inane squabbles between academics and those in education. Debates over content vs. methodology are of no value; any good teacher—at whatever level—knows that both are necessary and neither can exist alone.

Inaugurating a Doctor of Arts Program requires courage. Too many of our colleges and universities have lacked it. The ultimate benefactors of the Doctor of Arts Program will be thousands of students.

TOWARD A PROFESSION OF COLLEGE TEACHING

Knowledge or information is only one of a number of objectives of a college education. Specific knowledge is soon forgotten if not frequently used, and it is unlikely to be frequently used unless its relevance is perceived by students as they learn. This means that selection in terms of relevance must be exercised and that the acquiring of information must be coupled with experiences illustrating and requiring the use of that information. In many disciplines, past knowledge quickly becomes obsolete. Hence, teaching which focuses solely on knowledge and past attempts at organizing it is indefensible.

For lasting value, an education must inculcate more than knowledge. Another objective might be the mastery of the mode of inquiry characteristic of a discipline. Such a mastery can provide a method of investigating and of understanding problems whether or not an individual pursues further work in the discipline. But methods of inquiry, too, will erode with disuse, and not all disciplines possess a mode of inquiry.

Personal characteristics and commitments may be influenced by education. Few faculty members would disagree with the view that respect for facts, regardless of implications, is desirable. Tolerance of uncertainty and ambiguity is an essential component of a liberal education. Intellectual and aesthetic interests usually appear in statements of college objectives. Self-realization or personal development, is acceptable to only a minority of most faculties, and they may accept the ideas without grasping the implications.

In the past, the college curriculum and courses which compose it have grown apace with little concern exhibited about these broader educational issues. Requirements based on faculty biases and departmental interests have eliminated or reduced the choices of the student. New courses and programs have appeared with little rationale other than student desire,

external pressure, or (and most commonly) faculty insistence. A complete reorientation to college teaching is required if these long-time tendencies are to be replaced by a focus on student learning. The professor who professed his own knowledge and views must be replaced by a teacher who facilitates learning by his students. The professor has been judged by what he knows, the teacher will be judged by what his students learn. This calls for a new career definition and a number of alternative career targets. Focus on a career as a teacher requires that the role be defined as that of a planner and facilitator of learning. This mea s that a prospective college teacher does not simply supply a demonstration of good teaching at some point in time. Rather, he demonstrates the acquisition of knowledge, ability, insights, skills, and motivation which make it possible for him to continually update courses in the light of new research findings, improve teaching by use of new materials and techniques, and by assuring himself and others that he can find satisfaction and a sense of exhilaration in a career which is primarily that of communicating effectively to others the nature and use of concepts, ideas, techniques, and skills which constitute the accumulated reservoir of knowledge of the human race.

In this conception there are a number of possible career opportunities. One of these, obviously, is teaching in the community college or the 4-year undergraduate institution. Postsecondary technical schools, and adult education are also good prospects. But, in addition, persons of this type should be employed in universities, not only to improve the undergraduate instruction in the university, but also to engage in supervision of Doctor of Arts candidates, in the teaching of the educational component of teaching-focused programs and research in teaching and learning (the communication of knowledge). Individuals who have accepted the charge of engaging in facilitation of learning may also be found in such other specialties as instructional system design; preparation, supervision of preparation, and the design of software for technologies; media in schools or industry; the design of completely new educational systems, and research into communication of knowledge in schools, industry, and government; adult education; nontraditional education; external degree programs; the synthesis of research relative to undergraduate course revision; and interdisciplinary programs.

This broader interpretation of the teaching role does not deny the validity of the role as the purveyor of a subphase of a discipline in a graduate school or even in a strong undergraduate liberal arts college which is oriented to preparation of students going on to graduate school. This broader interpretation does give greater emphasis to a conception of teaching which involves presentation of disciplinary-based materials in a more coherent, unified way, and with as much concern for their applicability as for their essential nature. It involves also a particular sense of obligation and of adaptation of materials to meet the needs of non-majors who have little

concern about the disciplines in themselves but are often interested in what may be learned from a discipline for use in other areas. This broader interpretation of the teaching role also involves the possibility that at times the teacher may find it more motivational for students to deal with problems, issues, or concerns which are inter- or transdisciplinary in nature but which can be better understood when materials from related disciplines are brought into focus in an attempt to understand and resolve the issue or problem.

This broad conception of teaching and the preparation for teaching at the college level raises a number of issues, which means that the selection of students for a teaching-based program and the whole orientation of the program will necessarily be somewhat different than has been true for the PhD. Successful teachers must possess some affective characteristics which are totally irrelevant for people who are viewed as entering into a research career or who are dealing with advanced students whose primary interest is in absorption of the essence of a discipline. At the same time, any attempt to select individuals on the basis of personality and emotional characteristics as well as professed interest in teaching poses some serious problems, particularly in an era where people are highly sensitized to any form of bias or prejudice which militates against equity in the treatment of individuals. Selection must take into account these factors, but it will have to be done in frank discussions with individuals rather than in secret sessions or by subterfuge.

Many faculty members will find it difficult to shift their emphasis from the discipline to the education of prospective teachers whose primary concern must and should be the teaching of the discipline rather than the discipline itself. This involves a shift in attention from expanding the discipline to expanding the use and application of the discipline, and only as there are persons in a department or university who already accept that role as a high calling in its own right, will the preparation of college teachers be successful.

In general, programs for preparing college teachers may expect to be primarily involved—at least for some time to come—with mature people who have been teaching for several years. Indeed, it is probably wise to require that most people who seek to take a teaching doctorate have had two or three years of full-time teaching experience so that they can be reasonably certain that they want to spend the rest of their lives in this activity. A number of issues will arise. Some of these people will have family responsibilities and find that any significant period of time at less than full-time employment and income is impossible. With a research-oriented degree, a case could be made that the individual must be on campus for a period of time, work with researchers, and have an intensive training in research at a time when there are no other matters intruding. For the college

teacher who wants to continue to be a college teacher, this is less clear. A number of programs have been fairly liberal in admitting part-time people, and it may well be that for a teaching degree study, which in many aspects is closely and intimately related with teaching, can be effectively combined with a full-time teaching job. These individuals will exhibit greater variation in background and ability than has been true with students entering the research-oriented PhD programs. This means that there must be a great deal of flexibility in the organization and degree planning for these students, and some means must be found to alleviate the exigencies of departmental organization and discipline-based graduate degrees to adjust to the backgrounds of individuals and to the aspirations that they have for particular roles in the college teaching field. In particular, the need for persons competent in dealing with informal nontraditional education and with external degree programs for adults will require the education of teachers who are able to think in terms of broad competencies which transcend interdisciplinary lines and which greatly outweigh in importance the specific kinds of materials usually emphasized in the disciplinary-based course.

This means that a program for college teachers will usually lack the specific requirements found for the research-based degrees and that a great deal of mature appraisal and planning will be required by the candidate and the candidate's committee in order to maintain a degree with high standards which, at the same time, is adjustable to the needs and experience of the individual. Such a program, which may bypass certain typical requirements for the PhD in the area of examinations as well as in course work, may run the risk of being characterized as a degree of lesser standards. But those who are inclined to make such charges are likely to make them anyway. Even now in departments where the DA degree has been essentially a PhD plus, this disparagement has not been avoided. The more serious problem is that in some of these departments the faculty members to whom students seeking the DA have been exposed have not themselves been adequate models of teaching and that the faculty members assigned to treat teaching materials, methodology, and techniques have not themselves had adequate experience in so doing. But at this point we need have less concern about the comparisons between a degree for college teaching and a degree for research; rather, we need to come to grips forthrightly with the characterization of a degree for college teaching which provides adequate flexibility and yet which promises to meet the actual needs that exist. Accordingly, we turn to a presentation of some of the characteristics which should hold for any graduate program directed to the preparation of college teachers.

A graduate program directed to the preparation of college teachers should provide experiences which will enable the teacher to:

- acquire knowledge in depth of some body of content, its structure and methodologies and ability to present it effectively to students;

- increase the quality of student learning by emphasizing objectives which highlight the understanding and the application of knowledge rather than the mere acquisition of facts;

- define objectives and standards to be achieved by students and encourage students to assume personal responsibility for their attainment;

- broaden the conception of instruction to include techniques beyond the ubiquitous lecture and the so-called discussion which is too often limited to a recitation or question-answer approach;

- develop sensitivity to student concerns and motivations and ability to interpret the teacher's field in such manner as to arouse student interest;

- utilize educational technology to more effectively present ideas to individuals and to groups and to develop materials and procedures for integrated instructional and learning systems which can be made available for individualizing and strengthening learning, whether in traditional or in informal surroundings;

- develop a body of professional knowledge and of skills essential to effective communication of knowledge including: knowledge of and ability to apply principles of human learning and of motivation to the development and utilization of improved teaching procedures, awareness of and willingness to use a wide range of media for improving instruction and constructing more effective courses designed in reference to a total curriculum and learning of objectives of that curriculum;

- recognize that for many students (including most majors) contact with a particular course or discipline will be of little consequence unless they acquire some understanding of the significance and relevance of the materials to other areas of interest and to the problems and concerns of society; and unless they also acquire increased facility in broad behavioral objectives transcending particular courses and disciplines but essential to successful performance as a citizen and worker in society;

- develop awareness of the learning process and of individual differences in interest and ability such that adaptations of assigned tasks and expectations can be made;

- develop feedback procedures whereby the teacher and each student are kept informed as to progress;
- be sensitive to values and preconceptions implicit in the teacher's discipline and in the application of its principles and concepts to social and personal problems;
- focus on the learning of individuals and on the development in individual students of insight, motivation, and abilities necessary to make them capable of continuing their learning beyond the confines of the highly structured classroom and campus;
- maintain continuing scholarly activity which keeps the teacher abreast of new developments;
- develop awareness of the relation of his discipline to other disciplines and to the current social scene, and accept the obligation of communicating these relationships to students;
- develop awareness of the role which each course plays in the total undergraduate experience and a commitment to assist the student in integrating his experiences in the course with other aspects of his education.

To attain these goals, the prospective teacher certainly requires knowledge in depth of a discipline or of the essential concepts, methodologies, and value commitments of a group of related disciplines. But scholarship, in the sense of knowledge of content and of disciplinary structures and methodologies, is not enough; indeed, it may be subsidiary to other insights and competencies for success, as a teacher must be evaluated in reference to what students learn and apply as a result of their experiences with a teacher.

A graduate program which accomplishes this must have:

1. Admission requirements which specify evidence of a deep interest and possibly some experience in teaching students; evidence of interest in communicating knowledge in ways which make a difference in the thought patterns and capabilities of students; evidence of interest in interrelations of disciplines and of their applicability in understanding and resolving the problems of individuals and society.
2. Examinations which are as much concerned with ability to communicate effectively with students as with substantive knowledge.

3. Extra-departmental and interdisciplinary courses which require that the student relate his field of major study to other fields so as to enhance his insights into the significance of his major field and his ability to make it more meaningful to students of diverse interests and abilities.

4. Courses in which the professors are continually as concerned about the effectiveness of their own presentations as about the details and niceties of the materials presented.

5. Graduate advisers who are in continuing contact with the candidate to assist him in interrelating and acquiring maximum benefit from his several experiences.

6. Flexibility so that adjustments and waivers of aspects of the program will be made on the basis of the candidate's prior experience or individual interests and needs.

7. Program definition in terms of attainment of the competencies required for successful college teaching rather than in terms of credit quotas or percentages to the various elements of the program. The suggested pattern of experiences is only a means of attaining these competencies; the acquiring of the competencies rather than slavish, routine completion of requirements should be the basis for conferring the degree. The three years suggested should be regarded as a maximum period for most individuals rather than as a minimum for all.

8. The possibility of programs embracing two or more disciplines viewed not in reference to their adequacy in providing mastery of the several disciplines, but rather as justified by the specification of unifying principles, problems, or themes and by the type of instruction and institutional program toward which the candidate is oriented.

9. Avoidance of comparisons of the quality of the professional undergraduate teaching degree (however designated) with the research-oriented PhD degree. (Comparisons with professional degrees, such as the DBA or MD, would be more to the point.)

10. An internship experience which, depending on the prior experience and ability of the individual, may move through several levels from observation of an unusually effective professor, assisting and consulting with such a person, developing and presenting (not solely by lecture) materials under the supervision of this professor, but which culminates in full responsibility for preparing, teaching, and evaluating one or more courses. At least one of these courses should involve students other than majors and thereby require the teacher to be aware

of the diversity in backgrounds and goals which presents one of the most difficult teaching tasks.

11. A thesis, dissertation, research, or evaluation effort which provides a demonstration of the prospective teacher's ability to interpret his knowledge base to students in ways which facilitate broad behavioral learnings rather than rote recall of facts.

Ideally, the internship experience should be closely related to and involve prior substantive learning in the teaching field(s), understanding of the nature of the learning process, of the student concern for relevance, of motivational problems, and of behavioral or liberal education objectives which transcend the specific materials covered. It should, in the preparation of the course, in the instructional process, and in the evaluation, provide an opportunity for an evaluation or research paper which demonstrates that the student has integrated all facets of his graduate training into an effective teaching performance which exemplifies a pattern of success in his chosen field as a college teacher of students as well as of a discipline.

Such a culminating experience would correct the danger inherent in a program which draws upon several fields of knowledge and can too readily result in a number of isolated experiences (disciplinary courses, professional courses, internship, and research) which are never integrated into a model of expected professional behavior. This danger is greatest in a department in which research-oriented faculty members teach the substantive courses of the discipline and, in so doing, ignore or disdain any concern about teaching methodology or about the possible implications of the insights developed in the course for the improvement of undergraduate courses. Unquestionably, the impact on prospective undergraduate teachers will be greatest when *all* their graduate professors evidence some concern about their teaching and the quality of learning which ensues from it.

Consistent with this view, it is essential that no department and no collection of faculty should undertake a graduate program to produce teachers unless there is present also a strong undergraduate program which emulates in goals and practices what is expected of the graduate student in his career as a college teacher. The major weakness of many PhD programs in preparing college teachers lies not only in the pervasive research commitment, but in the evident disdain of many professors for teaching undergraduates, in teaching assistantships in highly structured traditional courses, and in the fact that these teaching assistantships are viewed more as a way to support graduate students and relieve the professors of introductory teaching responsibilities than as internships in teaching.

There is some faint recognition of this situation in the tendency in some DA programs to insist that internships be on another campus—preferably a liberal arts college or a community college. And there is also a tendency to suggest, if not require, that the internship be in an advanced (junior or senior) undergraduate course. Teaching on another campus poses problems of acclimatization and frequently of fitting into a prevalent point of view about instruction which is highly structured by the graduate training of the existing faculty. As an intern, the student certainly cannot defy the existing norms and he may become more preoccupied with adjusting to local expectation than to developing his own style. Furthermore, some questions may be raised about the adequacy of an internship in an advanced course which typically enrolls majors or, at the least, students with a strong interest in the discipline. The poorest teaching in the university or the 4-year college—and certainly in the community college—is found in the large freshman and sophomore courses which are heavily populated by students fulfilling a distribution requirement, taking the course as a requirement for another major, or simply filling out a program with a course offered at a convenient hour. Many of these students are potential dropouts and some are potential majors. Most of them are capable of learning but, unmotivated and unchallenged, simply ride through with reasonable assurance that minimal effort will be rewarded by at least a passing grade. It is in these courses that the problems of class size, alternative teaching strategies, motivation, and individual differences are most prominent. Courses in a discipline especially (though often poorly) designed for specific groups of nonmajors also present teaching and curriculum development problems. Mathematics for business students, science courses for nonmajors, and history of civilization as a general education offering are common examples. For some graduate students preparing to teach, involvement in such courses will provide an experience far more significant than one of the typical courses designed for majors by professors with highly specialized interests in a narrow aspect of the discipline.

In addition to explicitly teaching-related responsibilities and functions, college teachers serve as advisers and as members of committees which plan curricula, define requirements, and specify scholarship standards. As an adviser, the teacher needs to interpret the significance of his own discipline in reference to the aspirations and plans of the individual student. He needs also to be aware of other disciplines which might strengthen the student's capability for various vocations. He should be able to explain the total college program to the student and help him to plan his own. As a participant in planning and governance activities, the teacher needs to have a personal philosophy of undergraduate education and some understanding of the history and the trends of American higher education. As a member of a profession, the teacher has certain rights and privileges; he

also has certain ethical responsibilities to his students, to his colleagues, and to his institution.

A program to prepare college teachers should assess all of these competencies and provide experiences designed to foster them. Formal credit courses need not be provided on each point; candidates should not have precisely the same experiences; and there is no one pattern of college teaching or type of institution to which preparation should be gauged. The graduate school and the departments should be more flexible so that individuals can obtain an alternative to the specialized research-oriented PhD suitable for a professional career as a college teacher. For those universities which accept the obligation, nothing short of a reform of graduate education and of the attitudes of graduate faculty will suffice.

The degree designation of PhD, EdD, or DA is largely immaterial and more dependent on local traditions and mores than on arbitrary sets of regulations or requirements. Our personal preference, at this moment in time, is to retain the PhD as a research-oriented degee and designate the teaching degree as a DA, simply because our observations of the attempts to divert the PhD to this latter role suggest only half-measures falling far short of what is required.

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